

Developments in Marketing Science:  
Proceedings of the Academy of Marketing Science

Venkatakrishna V. Bellur *Editor*  
Thomas R. Baird · Paul T. Hertz  
Roger L. Jenkins · Jay D. Linqvist  
Stephen W. Miller *Co-Editors*

# The 1980's: A Decade of Marketing Challenges

Proceedings of the 1981 Academy of Marketing  
Science (AMS) Annual Conference



 Springer

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Thomas R. Baird, Paul T. Hertz, Roger L. Jenkins,  
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Science (AMS) Annual Conference



**Miami Beach, Florida**

**April 29 - May 2, 1981**

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Reprint from Original edition

Developments in Marketing Science, Volume IV edited by Venkatakrishna V. Bellur

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Developments in Marketing Science: Proceedings of the Academy of Marketing Science

ISBN 978-3-319-16975-0

ISBN 978-3-319-16976-7 (eBook)

DOI 10.1007/978-3-319-16976-7

Library of Congress Control Number: 2015937185

Springer Cham Heidelberg New York Dordrecht London

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## FOREWORD

Volume IV of the 1981 Annual Conference Proceedings represents another milestone in the growth and progress of the Academy of Marketing Science. This Conference, THE 1980's: A DECADE OF MARKETING CHALLENGE, presents the academicians and marketers a challenge and an opportunity to explore the future of marketing science.

A total of 154 papers were received by chairpersons representing 12 tracks. These papers were read by a large and diversified group of reviewers in the usual double-blind refereeing process. The review process resulted in the inclusion of 103 papers in the 1981 Proceedings, Volume IV.

This volume of the Conference Proceedings includes 13 operative tracks. They are: (1) Channels of Distribution; (2) Consumer Behavior; (3) Industrial Marketing; (4) International Marketing; (5) Marketing Education; (6) Marketing Management; (7) Marketing Research; (8) Non-profit and Health Services Marketing; (9) Promotions; (10) Public Policy; (11) Quantitative Marketing; (12) Research-In-Progress; and (13) Miscellaneous. The track on Non-profit and Health Services Marketing is new to the Academy of Marketing Science Proceedings. This track is especially relevant and timely as we enter the decade of the 1980's in light of the need for better, efficient, and less expensive health services.

We wish to thank the authors of the papers for following the guidelines in preparing the manuscript for publication. In addition, we would like to thank Drs. Dub Ashton, Harold W. Berkman, Jane K. Fenyo, and Robin T. Peterson; Mrs. Kirsten Bellur; track chairpersons; and reviewers for their timely assistance and guidance.

We also wish to express our appreciation to the following individuals for the financial and personnel support provided to meet the expenses related to the publication of the *Proceedings*: Dr. Joseph D. Brown, Director, Bureau of Business Research, and Dr. James R. Lowry, Head, Department of Marketing, College of Business, Ball State University; Dr. Robert B. Glenn, Provost, and Dr. Robert N. Hanson, Dean, School of Business and Management, Northern Michigan University; Dr. John W. Wagner, Dean, and Dr. Guy R. Banville, Associate Dean, School of Business Administration, St. Louis University; Dr. Gary Dicer, Head, Department of Marketing and Transportation, and Dr. Warren Neel, Dean, College of Business Administration, University of Tennessee, Knoxville; Dr. Gary M. Walton, Dean, School of Business Administration, University of Miami; and Dr. Darrell G. Jones, Dean, College of Business, and Dr. Luarel Grotzinger, Dean, Graduate College, Western Michigan University. In this context, we also want to thank the following Cosponsors: California State University, Fullerton; C.W. Post Center, Long Island University; Concordia University (Marketing Department); Eastern Michigan University; Georgetown University; New Mexico State University; Stephen F. Austin State University; University of Denver; University of North Carolina, Greensboro; and University of North Dakota.

We have exercised every care in compiling this volume but recognize errors of structure and omission. Papers received after the deadline date are included in the Miscellaneous section of the *Proceedings*. Please relax, read, and explore the contributions by your colleagues.

April 29, 1981  
Miami Beach, FL.

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## PREFACE

The Academy of Marketing Science is a consortium of University academicians and business executives whose purpose is to :

1. Further the science of marketing throughout the world by promoting research and the dissemination of findings.
2. Provide a forum for studying and understanding of marketing as an economic, ethical, and social force.
3. Furnish, as appropriate and available, material and other resources for the solution of marketing problems which confront particular firms and industries, on the one hand, and society at large on the other.
4. Provide for the Fellows of the Academy reviewer assistance on scholarly articles and opportunities for publication.
5. Sponsor one or more annual conferences to enable the Fellows of the Academy to present research results; to learn by listening to other presentations and through interaction with other Fellows and guests; to avail themselves of the placement process; to conduct discussions with book editors, and to exchange other relevant information.
6. Assist Fellows in the better utilization of their professional marketing talents through re-direction, reassignment, and relocation.
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8. Seek means for establishing undergraduate scholarships and professional university chairs in the field of marketing.
9. Offer Fellows of the Academy status to business and institutional executives and organizations.
10. Establish Chapters of the Academy worldwide.

Devoted to implementing these goals, the Academy continues to move forward. *The Journal of the Academy of Marketing Science*, the Academy Monograph Series, and the Academy's Annual Conferences promote research act as a vehicle for its dissemination, and provide a forum for stimulating communication and interaction. The number of our Fellows and of institutional subscribers steadily increases, and the *Journal's* national and international recognition spreads dramatically. It is now subscribed to in all the United States, including, of course, Alaska, Hawaii, and Puerto Rico. Internationally, its reach has grown rapidly; foreign subscribers exceed 150. In Canada they are extensive both in numbers and in geographic reach. Over 100 are sent overseas. In Europe the *Journal* goes to Belgium, Denmark, England, Finland, the Netherlands, Spain, Sweden, Switzerland; but the *Journal* is also subscribed to in Australia, British Columbia, China, Egypt, Guam, India, Israel, Japan, Korea, Mexico, Nigeria, Manila, Nicaragua, Trinidad, and Turkey. Library and business requests for information and samples arrive constantly from new regions.

A vote of gratitude is due to our Academy President, Robin T. Peterson, under whose leadership the Academy has markedly advanced toward its goals.

Congratulations to Ms. Jane Campbell "Casey" Cousins, our Marketer of the Year. Thanks to Dub Ashton, our 1981 Conference Programs Chairman for an excellent job of Conference planning. We appreciate the hard work done by Venkatakrishna V. Bellur, Editor and Conference Programs Cochairman, in editing these proceedings, and Ms. Sandra W. Marsh in seeing to the production. Congratulations and thanks to authors whose work is published here, and to our Research-In-Progress authors we offer support and encouragement for successful completion of their projects. To the reviewers of papers submitted for the Conference, track chairpersons, session chairpersons, speakers and discussants, we express our thanks for their important contributions. We are indebted to the University of Miami and to our local arrangements committee headed by Randall Hess for the arrangements in Miami Beach. The participation of our business colleagues is a strong and rewarding part of Academy operations. Finally, thanks to our Conference Cosponsors for their financial and moral support. On behalf of the Officers of the Academy, please accept our best wishes for a pleasurable and profitable Conference.

April 29, 1981  
Miami Beach, FL

Harold W. Berkman  
Jane K. Fenyo



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## RETAILERS AND ENERGY CONSERVATION - A SECOND LOOK

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### Abstract

Retailers were surveyed to determine their attitudes about energy conservation. This paper describes the findings and compares them to results obtained in a previous study of retailers' energy conservation attitudes which was reported at the Third Annual Conference of the Academy of Marketing Science.

### Introduction

During the 1970's American industries and citizens became more aware of the need to conserve energy. Fuel prices rose rapidly and the likelihood of interruptions in foreign oil supplies increased. There was a growing realization that supplies of fossil fuels might run out some day and that some alternatives were not economically feasible nor totally safe. The beginning of the new decade of the 1980's did not mean the end to what has become known as the "energy crisis." Two major oil supplying nations engaged in a destructive military conflict that threatened to spread to other vital energy producing areas. An obvious response to the world-wide energy situation in the short term is to conserve energy supplies.

When searching for approaches to reduce U.S. energy consumption, special attention should be paid to the retail-commercial sector which has recently accounted for 14.4 percent of total energy consumption (Public Technology, Inc. 1975). Between 1968 and 1975 the retail-commercial sector's increase in energy consumption grew faster than consumption in residential, transportation, and industrial sectors. Furthermore, the Federal Energy Administration expects a 43 percent increase in retail-commercial energy consumption between 1975 and 1985 while expecting lesser increases in industrial and other sectors (Roberts and Redfering, 1979).

The cost of energy to the retailer continues to rise. Chain Store Age (1979) estimates that utility expenditures for supermarkets reached \$3.61 per square foot in 1979. Most other retail stores had utility expenses ranging from \$2.25-\$3.00 per square foot. Space conditioning accounts for 51 percent of total retail energy consumption, lighting 18 percent, water heating 6 percent, cooking 15 percent, refrigeration 6 percent, and other uses 4 percent (Federal Energy Administration, 1977).

Fortunately, sizable quantities of energy can be conserved by retailers through methods that involve little or no capital expenditures. Chain Store Age (1978) points out that by simply trimming energy wastes a retail store can cut its energy bill by 15 to 20 percent. Federal government agencies agree that substantial savings can be achieved relatively easily, but their estimates vary somewhat. The Federal Energy Office estimates savings in the commercial sector can approach 25 percent by using techniques that require no capital outlays (Roberts, 1977). The National Bureau of Standards projects a 30 percent energy savings in the retail-commercial sector through the use of simple energy conservation techniques (Roberts, 1977). There

is a general consensus that substantial energy savings can be achieved through better maintenance, closer control of operations, and a positive attitude toward conservation.

Though many retailers have dramatically reduced their energy consumption in the last few years, many others have not taken any conservation steps nor have they fully implemented a large number of low-cost or no-cost conservation techniques. Why retailers have not adopted conservation techniques is not well understood because most previous studies of retail energy conservation have ignored the attitudes and energy conservation knowledge of retail store managers, owners, and executives. A major exception is an insightful study of Florida retailers which was reported by Roberts and Redfering (1979) at the Third Annual Conference of The Academy of Marketing Science. That provocative study was a stimulus for the study reported in this paper.

The purpose of this present paper is to report key findings obtained during a recent study of the energy conservation attitudes and beliefs of Colorado retailers and to compare those findings to the results obtained in the study of Florida retailers. The public policy implications of those findings are also examined. The method and findings of the Florida study are reviewed first and then the method and findings of the Colorado study are reported and compared to the Florida data.

### The Florida Study

During the summer of 1977, researchers from the University of West Florida surveyed retail establishments in the six largest metropolitan areas in Florida. The respondents were randomly selected from six retail categories, and the total population was defined as those firms which were listed in the "yellow pages" of the telephone directory. The six retail store categories were groceries, department stores, restaurants, pharmacies, discount stores, and shopping malls.

The survey consisted of a series of structured personal interviews. Two hundred retail managers and assistant managers were selected to be interviewed, and the researchers were able to complete interviews with 159 of them. The interview contained 53 questions which required approximately 45 minutes for completion.

One key finding was that the retailer respondents believed that the U.S. energy problem was real and should be of concern. Approximately one-third said it was a very serious problem; over one-half said it was a serious problem, and the remaining one-sixth believed that the energy problem was minor or did not exist. However, the respondents often indicated that the problem might soon disappear because of technical breakthroughs. Many were prone to place blame for the high level of national energy usage on people and industries in other parts of the country.

Another key finding was the lack of knowledge about federal energy guidelines. Approximately two-thirds of the managers were not aware of the voluntary

With regard to the voluntary adoption of energy conserving techniques, the managers felt energy conservation should be a voluntary program at first with mandatory cutbacks later. Most managers indicated considerable reluctance for government to enforce and impose energy regulations, but 33 percent of the retailers felt that mandatory controls were the only ways to obtain substantial energy conservation. In fact, when they were asked for suggestions on how to alleviate the energy problem, the only clear suggestion was for the government to impose mandatory lighting and temperature levels; although the government's program would have to be fair and equitable.

The retailers stated that greatest effort in energy conservation could be expected when there was a financial incentive. Most who had already implemented energy conservation procedures said they did so because it was cost effective. Not surprisingly, more than three-fourths were in favor of government tax credits for energy conservation programs.

The respondents showed generally favorable attitudes toward specific energy saving techniques. Seventy percent had already extinguished interior lights more often and sixty percent had extinguished lights at additional times. They were far less likely to have altered the store's temperature and were not in favor of curtailing store hours in the future.

#### Methodology: The Colorado Study

Unlike the personal interview approach used in the Florida study, the Colorado study of retailer attitudes used a self-administered questionnaire which was mailed to retailers. These questionnaires were sent to a total of 383 retail stores in Fort Collins and Loveland, Colorado. The recipients included all retailers in the following retail activity areas as defined by the SIC numbers shown in brackets: eating places (5812), food stores (5411), general merchandise stores (5311, 5331, and 5399), building materials (5211, 5251), apparel and accessory stores (5611, 5621, 5631, 5641, 5651, 5661) and furniture, home furnishings and equipment stores (5712, 5713, 5722, 5732). These categories were selected because of the diversity of their operations, their visibility to consumers, the relatively high numbers of stores in each category.

The questionnaires were pretested and mailed during March, 1980. Three weeks later, a 41 percent response rate had been achieved. It was decided to mail out a follow-up questionnaire to the remaining non-respondents. This second wave of questionnaires resulted in a total 57.7 percent response rate, which is relatively high for a mail questionnaire.

Table 1 shows the number of questionnaires and the response rate by type of retail store. Only the eating places category had a response rate below 50 percent, but that category is the one with the highest total number of respondents. Ninety percent of the people completing the questionnaire were either store owners or store managers.

A portion of the questionnaire consisted of statements about the energy crisis. Retailers were asked to indicate their degree of agreement with the statement. A five-point Likert-type scale was used to quantify responses with a value of five for strongly agree, four for agree, three for uncertain, two for disagree, and one for strongly disagree.

The Colorado study, like the Florida study, revealed that retailers believe that there is a serious energy problem in the U.S. As shown in Table 2, nearly half strongly agreed with the statement, "There is an energy crisis in the United States." Another 38 percent agreed with the statement and only 8 percent disagreed or strongly disagreed. Furthermore, 71 percent of the responding retailers believed that conservation by retail stores was a major way to reduce total energy consumption.

In another portion of the questionnaire, retailers were asked whether or not they were adequately informed about government imposed store temperature restrictions. Three-fourths answered that they were. This is in sharp contrast to the Florida study where two-thirds were not aware of temperature guidelines. Explaining much of this change in knowledge is the fact that the government implemented the Emergency Building Temperature Restriction (EBTR) program in July, 1979. President Carter and other government agencies attempted to gain maximum publicity for the new guidelines which called for thermostats in most non-residential buildings to be set no lower than 78 degrees in the summer and no higher than 65 degrees in the winter.

Only 41 percent of the respondents indicated that they were aware of federal lighting level guidelines. While this is more than were aware of the lighting guidelines three years earlier in Florida, it is below what might be considered acceptable.

A key issue is retailers' attitudes toward government-imposed temperature restrictions. Florida retailers were opposed to mandatory controls. However, their attitudes were measured prior to enactment of the EBTR program. Colorado retailers were questioned when the EBTR program was in force. As shown in Table 3, almost half of the Colorado retailers believed that the EBTR program was effective in reducing energy consumption. Relatively few believed that it cuts volume or lowers productivity. There were mixed reactions as to whether it produced customer complaints. Many thought the EBTR discriminated against some types of retailers.

As in the Florida study, Colorado retailers believed that financial incentives were of critical importance in adopting conservation measures. Surprisingly, 55 percent of the Colorado respondents believed that implementing conservation procedures is usually cost effective for the retailers. In both the Colorado and Florida studies, three-fourths of the respondents thought that the government should offer tax credits to retailers for implementing energy conservation procedures.

Finally, despite nearly three years between the studies and increased publicity about how retailers can save energy, the Colorado and Florida retailers stated that they had implemented specific programs to about the same degree. As shown in Table 4, about 30 percent had removed lights from fixtures, 60 percent had reduced exterior lighting, 50 percent had decreased lighting in non selling areas and less than 25 percent had installed interior reflective material, added insulation, or curtailed hours of service. The major difference is in the area of reducing interior lighting. Florida retailers were much more likely to have taken that step. In general, Florida retailers were more likely than Colorado retailers to be in favor of energy conservation procedures they had not yet adopted.

TABLE 1  
RECIPIENTS OF THE MAILED QUESTIONNAIRE AND FINAL RESPONSE RATE

Retail Activity	Number of Respondents	Total Number in Category	% Returned
1. Eating places	71	153	46.4%
2. Food stores	25	35	71.4%
3. General merchandise	15	19	78.9%
4. Building materials	20	26	76.9%
5. Apparel and accessory	51	92	55.4%
6. Furniture, home furnishings, and equipment stores	39	58	67.2%
Total	221	383	57.7%

TABLE 2  
ATTITUDES TOWARD ENERGY CONSERVATION/FREQUENCIES AND (PERCENTS)

Statement	Extent of Agreement (Weighted Values)*				SD (1)
	SA (5)	A (4)	U (3)	D (2)	
There is an energy crisis in the United States. (n = 218)	102 (46.8%)	83 (38.1%)	16 (7.3%)	15 (6.9%)	2 (.9%)
	Mean = 4.299 Std. Dev. = .922				
	Coefficient of Variation = .218				
Conserving energy by retailers is a major way to reduce total energy consumption in this country. (n = 219)	45 (20.5%)	111 (50.7%)	33 (15.1%)	27 (12.3%)	3 (1.4%)
	Mean = 3.767 Std. Dev. = .961				
	Coefficient of Variation = .255				

\*SA = Strongly Agree    A = Agree    U = Uncertain    D = Disagree    SD = Strongly Disagree

TABLE 3  
ATTITUDE TOWARD THE EBTR PROGRAM/FREQUENCIES AND (PERCENTS)

	Extent of Agreement (Weighted Values)*				SD (1)
	SA (5)	A (4)	U (3)	D (2)	
The federal government's mandatory "Emergency Building Temperature Restriction Program" is an effective program for reducing energy consumption by retail stores. (n = 219)	24 (11.0%)	81 (37.0%)	49 (22.4%)	49 (22.4%)	16 (7.3%)
	Mean = 3.219 Std. Dev. = 1.132				
	Coefficient of Variation = .352				
The "Emergency Building Temperature Program" discriminates against some type of retailers. (n = 218)	18 (8.3%)	73 (33.5%)	80 (36.7%)	43 (19.7%)	4 (1.8%)
	Mean = 3.266 Std. Dev. = .932				
	Coefficient of Variation = .285				
Reducing the temperature level to 65 degrees decreases sales volume in retail stores. (n = 219)	11 (5.0%)	37 (16.9%)	54 (24.7%)	93 (42.5%)	24 (11.0%)
	Mean = 2.626 Std. Dev. = 1.048				
	Coefficient of Variation = .399				
Customers complain when the temperature is 65 degrees in retail stores. (n = 219)	29 (13.2%)	68 (31.1%)	23 (10.5%)	87 (39.7%)	12 (5.5%)
	Mean = 3.068 Std. Dev. = 1.208				
	Coefficient of Variation = .394				
Keeping the store temperature at 65 degrees lowers productivity of employees in retail stores. (n = 219)	19 (8.7%)	39 (17.8%)	41 (18.7%)	97 (44.3%)	23 (10.5%)
	Mean = 2.699 Std. Dev. = 1.142				
	Coefficient of Variation = .423				

\*SA = Strongly Agree    A = Agree    U = Uncertain    D = Disagree    SD = Strongly Disagree

Major differences between Colorado and Florida retailers are in the areas of reducing interior lighting and altering store temperatures. Colorado retailers favor adjusting store temperature while Florida retailers favor reducing interior lighting. Colorado retailers (67%) said they have already decreased store temperature during cold weather months, but fewer (38%) said they had reduced interior lighting. Few Florida retailers (30%) on the other hand, have altered store temperatures (increased them during warm weather months) but many (70%) have reduced store lighting. The Colorado study was conducted after the EBTR program went into effect thus making the altering of store temperature mandatory. This fact may account for the differences detected.

#### Conclusion

Five major conclusions can be drawn from the two major studies of retailer attitudes about energy conservation:

1. Retailers continue to believe that there is an energy crisis. The Colorado study indicates that retailers believe that energy conservation by retailers can help alleviate that crisis.
2. Retailers are more aware of government temperature restrictions on retail businesses. However, there is a lack of knowledge of the guidelines for lighting levels.
3. Retailers are largely supportive or at least not strongly against government temperature restrictions. They do not believe that the restrictions are severely harming their businesses.
4. Financial incentives are critical to motivating retailers to implement energy conservation procedures.
5. Retailers have implemented or partially implemented a wide range of energy conservation procedures.

All five conclusions have public policy implications. Retailers are unlikely to doubt government claims that there is an energy crisis that needs to be responded to. Furthermore, retailers do not believe that the EBTR is unfair or unduly injurious. The government needs to continue its efforts to inform retailers about energy consumption standards and guidelines, especially in the lighting area. It should stress the financial advantages of implementing specific energy conservation procedures. Finally, retailers are willing to change their energy wasting ways, and they have already implemented a wide range of energy conservation techniques.

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TABLE 4  
MANAGER'S ATTITUDES AND DEGREE OF IMPLEMENTATION OF ENERGY CONSERVATION TECHNIQUES

Technique	Already Implemented		In Favor of Technique		Not in Favor of Technique	
	Florida	Colorado	Florida	Colorado	Florida	Colorado
Remove lights from fixtures	30%	31%	35%	8%	35%	51%
Reduce exterior lighting	60%	63%	30%	6%	10%	17%
Reduce interior lighting	70%	38%	20%	6%	10%	22%
Decrease lighting in non-selling areas	50%	51%	30%	7%	15%	13%
Install interior reflective material	15%	22%	30%	7%	38%	52%
Install additional insulation	10%	17%	54%	18%	25%	39%
Curtail hours of service	6%	13%	35%	3%	55%	70%
Altering store temperature*	30%	67%	40%	9%	20%	16%

\*Data is not directly comparable. The Florida study investigated increasing store temperature during summer months which the Colorado study investigated lowering temperatures during winter months.

A COMPARATIVE ANALYSIS OF SELECT CHANNEL  
MANAGEMENT PRACTICES IN FIRMS FROM  
FIVE INDUSTRY GROUPS

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Abstract

Data compiled from 100 manufacturing firms representing five industries indicates that several channel management practices differ significantly between those firms which have experienced an increase in wholesale sales through their own sales branches and offices and those firms which have not. Several implications are drawn in terms of the direction and extent of recent changes in management practices involved with the channels of distribution.

Introduction

An examination of the most recent report of the U.S. Census of Business, Wholesale Trade Statistics (see [Table 1](#)), reveals several interesting trends. For instance, among the types of wholesale institutions depicted in [Table 1](#), the percent of total wholesale sales

vide an especially useful backdrop for further analysis. Several questions can be posed - the most important one for this research, however, is directly associated with the increase in sales accounted for by SB&O's. Specifically, the research question appears as:

Do firms reflecting increased wholesale sales through sales branches and offices exhibit any characteristic patterns which significantly distinguish them from those firms which do not?

If characteristic patterns can be distinguished between groups of firms representing different degrees of dependence on SB&O's, this study will have accomplished several objectives.

Initially, on the basis of a comparative analysis of

TABLE 1  
PERCENT OF TOTAL SALES BY FIVE TYPES  
OF WHOLESALE INSTITUTIONS BETWEEN 1929-1972\*

TYPE	PERCENT OF TOTAL SALES							
	1929	1939	1948	1954	1958	1963	1967	1972
Merchant Wholesaler	43.7	42.8	41.9	43.0	42.7	43.9	44.9	48.6
Sales Branch and Office	24.2	24.5	27.7	29.6	30.7	32.6	34.2	35.2
Petroleum Bulk Station	3.6	6.8	6.4	6.8	7.1	6.1	5.4	4.6
Agent Broker	21.8	20.3	18.2	16.7	16.3	14.7	13.3	10.4
Assembler	6.7	5.6	5.8	3.9	3.2	2.7	2.2	1.2

\* U.S. Census of Business, Wholesale Trade Statistics, 1972.

attributed to assemblers and agent-brokers have, with only one exception, declined over eight census reports. Similarly, merchant wholesalers and petroleum bulk stations have both evidenced cyclical fluctuations in the percent of sales handled. Only one wholesale institution --- sales branches and offices (SB&O) --- has evidenced a consistent pattern of growth for every time period without exception. In fact, since 1929, SB&O's account for the largest, single growth pattern --- from 24.2% of total sales to 35.2% in 1972.

Perhaps even more interesting than the trend itself, however, are the implications in terms of the associated changes in manufacturers' channel practices. In other words, in light of previous research which has identified the need for longitudinal examinations of management practices in the channels of distribution, [ 1, 3, 5], the most recently identified patterns pro-

selected channel management practices, long term shifts and emerging patterns in manufacturer's channel management practices should be readily identifiable. Moreover, it may be possible to further examine causes for such shifts or patterns. For instance, if firms which have relied increasingly on SB&O's exhibit a characteristic pattern of more frequently evaluating overall channel performance, then it might be argued that the decision to utilize SB&O's was actually intended by the manufacturer to affect greater control in the channel --- one of the traditionally ascribed roles of SB&O's in the first place. Similarly, other characteristic patterns can be examined and compared on the basis of the previously suggested dichotomy of changes in SB&O's sales, to further explore plausible causal linkages in the managerial practices of manufacturers. Thus, this study is essentially designed to provide an examination of the channel management practices of select manufac-



turing firms.

Method

A Framework - To facilitate the identification of timely and relevant marketing channel decision variables, the initial phase of this research required the formulation of a basic, conceptual framework. Toward this end, Kotler's [2] framework for channel decisions seemed to be a viable starting point. As a result, the managerial functions of designing, planning, organization, and control as they relate to marketing channels, were included as the principal categories in the framework.

Sub-topics in each of these categories (i.e. dimensions or measurable attributes), were chosen on the basis of a two-phase process. First, several potential dimensions representing all four managerial functions were compiled. For instance, in terms of evaluating a planning dimension, the following type of question was applied: "Which channel objectives best coincide with your channel program? (1) To provide an economic and satisfactory movement of goods between production and consumption, (2) To minimize the costs of distribution, etc."

Second, interviews were arranged and conducted with either the marketing manager, sales manager, or president of fifteen firms representing five industries.<sup>1</sup> During these interviews, executives were requested to examine all of the dimensions compiled for each category and to select all of those (or add any of their own) which would best reflect the extent to which each characterized the managerial functions being performed in their own marketing channel activity. Thus, the dimensions researched and discussed in this article and presented as sub topics of the framework, represent only those considered relevant and valid by a majority of the executive group.

Participating Industries - In order to approach a degree of comprehensiveness in an examination of the research questions and since data for this study came from a broader investigation of channel management practices, it was considered imperative that the ultimate selection of firms reflect a cross-section of industrial classifications. Such a cross-section would minimize the selection of firms which either consistently utilized the same intermediary-types in their daily operations or represented similar historical developments in terms of channel compositions and dynamics.

Thus, subsequent to a review of the Standard Industrial Classification Codes, five industries were selected (See Table 2). In light of selection objectives, each can be seen to represent different mixes of intermediaries with respect to the dollar volume of sales accounted for by agent wholesalers, merchant wholesalers, and manufacturers' sales branches and offices.

For instance, even though the Motor Vehicle and Drug industries typically rely on manufacturers' sales branches and offices to conduct approximately 70% of the dollar sales volume, the proportion of sales volume accounted for by agent and merchant wholesalers is not only highly discrepant between these industries, but continuing to move in opposing directions. The Piece Goods, Notions, and Apparel and the Confectionary in-

dustries were selected on the basis that approximately half of their dollar sales volume was accounted for by

TABLE 2  
FIVE INDUSTRY GROUPS  
SELECTED FOR THIS RESEARCH

Industry
Motor Vehicles
Confectionery Merchandise
Drugs, Drug Proprietaries, and Druggist Sundries
Piece Goods, Notions, and Apparel
Farm and Garden Machinery and Equipment

Source: U.S. Bureau of the Census, U.S. Census of Business-Wholesale Trade, (Washington: U.S. Government Printing Office, 1929, 1939, 1948, 1958, 1963, 1967, 1972).

merchant wholesalers, thus contrasting directly with Motor Vehicle and Drug industries. Additionally, within the Piece Goods and Confectionary industries, the proportions of sales accounted for by agent wholesalers, and manufacturers sales branches and offices again were adequately divergent to justify selection for this study. Finally, the relative stability of the intermediary mix in the Farm and Garden Machinery and Equipment industry over the past fifty years presented the opportunity to include manufacturers' with well-entrenched channel practices. Thus, any cross-sectional comparison of firms representing different rates of sales through SB&O's, will reflect the pooled effects of several different industries.

Data. A mail questionnaire served as the primary data collection instrument. A total of 75 firms from the five industries were identified as evidencing a recently increased percentage of wholesale sales through SB&O's while a total of 25 firms were identified as maintaining SB&O sales status-quo.

Research Findings

As descriptive research, the findings have been compiled in tabular form. Each of the four managerial functions will be examined independently in terms of the dimensions chosen to represent them.

Channel Planning. Two dimensions of marketing channel planning were examined: the recognition of overall channel objectives, and the formalized statements of channel objectives. In terms of the first dimension, each responding firm was asked whether or not his/her firm stated (in writing) specific channel objectives. As indicated in Table 3, (See Variable 1, Stated Objectives), approximately 62% of the firms which evidenced an increase in wholesale sales through SB&O's indicated that channel objectives were stated in writing. In contrast, only 12% of the firms whose wholesale sales did not increase through SB&O's indicated that such written objectives existed. Thus, apparently some form of association exists between these firm's success with SB&O's (or at least increased sales), and the recognition of channel objectives. (Significant at the  $\alpha = .001$  level). While the precise direction of a causal link obviously cannot be pinpointed on the basis of this data analysis, the nature of the planning process would suggest that the increased usage of SB&O's was dependent and subsequent to the specification of channel objectives.

<sup>1</sup>The five industries represented were selected independently of the five industries utilized in the subsequent data collection.

TABLE 3  
 VARIABLE RELATIONSHIPS BETWEEN FIRMS EXPERIENCING INCREASED  
 SB&O SALES AND FIRMS EXPERIENCING NO CHANGE IN SB&O SALES

Variable Categories	Firms: SB&O's Increasing Sales	Firms: SB&O's Not Increasing Sales	Computed $\chi^2$	d.f.
(1) Recognition of Stated Channel Objectives:				
(a) Yes	34	3		
(b) No	21	22	17.31*	1
(2) Frequency of Channel Evaluation:				
(a) At least 4 times per year	46	8		
(b) At least 2 times per year	6	7	10.46**	3
(c) At least annually	14	5		
(d) Never	7	5		
(3) Position Charged With Channel Responsibility:				
(a) Corporate Level Sales Manager	26	10		
(b) Marketing Manager	23	6		
(c) Corporate Planning Staff	13	6	- Not Computed -	
(d) Marketing Channel Manager	3	0		
(e) No Position Charged	10	3		
(4) Size of Firm:				
(a) Small	28	14		
(b) Medium	19	6	3.74	2
(c) Larger	26	4		

\*Significant at the  $\alpha = .001$  level

\*\*Significant at the  $\alpha = .02$  level

To further explore this association, the second dimension of planning, the specification of precise objectives, was provided to permit a cross-comparison item-by-item. However, in light of the extremely small number of firms (12%) which were categorized as evidencing both no increase in sales through SB&O's and no recognition of stated objectives, additional statistical analyses were not possible.

Channel Evaluation. One dimension of marketing channel evaluation was examined: the frequency of formalized channel evaluations. In lieu of a highly subjective measure such as manufacturer's perceptions of their evaluation procedures, a surrogate measure of evaluation (i.e. frequency) was utilized. While such a measure necessarily involves several weaknesses (e.g. the extensiveness of such reviews is not considered), the measure would nevertheless, distinguish between firms which actually performed some form of evaluation and those that did not.

In terms of the frequencies of evaluations, responses were categorized as either: at least 4 times per year, at least 2 times per year, at least annually, and never. As a result, the  $\chi^2$  statistic for the cross-tabulation was significant at the  $\alpha = .02$  level. Consistent with the previous findings, firms which experienced an increase in sales through SB&O's also were involved in some form of channel review process more fre-

quently. Specifically, over 63% of the firms experiencing an increase in sales were involved in a channel evaluation at least twice per year in contrast to only 32% of the firms not experiencing sales increase. The corresponding differential at the other extreme (i.e. never conduct a channel evaluation), was not as pronounced, although a proportionately greater number of firms not experiencing sales increases through SB&O's also did not conduct or become involved with any formal channel evaluation.

Channel Organization. The third managerial function was operationalized in terms of the extent to which specific organization titles were recognized regarding channel management. This dimension was included as a follow-up on the recognition of formally stated objectives. The purpose was to uncover the extent to which firms actually accommodated channel management through their organizational structures (i.e. how committed to channel management were they?).

Four titles were provided by the responding firms: Corporate Level Sales Manager, Marketing Manager, Corporate Planning Staff, and Marketing Channel Manager. For the purpose of analysis, a fifth category, No Position Charged was also included. Unfortunately, due to the small sample size of firms not experiencing sales increases (n=25), further statistical analysis via  $\chi^2$  would be inappropriate. Moreover, an examination of the



response-pattern frequencies (See Table 3) did not illustrate any major discrepancies in terms of either type of firm utilizing a special position more or less often than other firms. The only noteworthy difference might be that none of the firms experiencing sales status-quo through SB&O's utilized a position officially titled Marketing Channel Manager. However, such a conclusion is indeed tenuous from a statistical standpoint.

Size of Firm. The final dimension included in this research involved the size of the firm in terms of gross sales. Firms with sales in excess of \$4 million were classified as larger, less than \$4 million but greater than \$1 million were classified as medium, and firms less than \$1 million were classified as small [4]. The concern at this point was whether or not the firms experiencing increasing SB&O sales were simply larger firms, and therefore capable of supporting larger and more diverse intermediary-mixes. If such were the case, then the previous analyses might very well be viewed as generating spurious results. For instance, the larger the organization, the more probable it would seem that some form of written objectives exist and formed evaluations of channels are conducted. Thus, this final portion of the analyses was viewed in large part as providing justification for the earlier comparisons.

Interestingly, the computed chi-square was not significant indicating that the firms experiencing increased sales through SB&O's were not characteristically different in size from those firms which did not experience such a change in sales. This finding suggests that the distinguishing phenomenon under investigation is not size-of-firm specific. In fact, this finding and the data collection method employed (i.e. combining firms in five diverse industrial classifications), would indeed suggest that the earlier findings must be viewed in association with the level of sales attributed to SB&O's.

#### Discussion

An interesting and new pattern of managerially-oriented practices associated with the channels of distribution has been uncovered in this research. Firms experiencing increased sales through SB&O's were empirically shown to exhibit characteristic differences in terms of this recognition of formally stated channel objectives and the frequency with which channel evaluations were performed. Although the existence of a causal link can only be suggested, there would definitely appear to be some association between successful and growing distribution patterns (i.e. those not exhibiting similar characteristics). Whether increasing sales provides a greater opportunity to formally consider channel management practices or whether greater attention to channel management practices provides the opportunity for greater sales are both questions which were not addressed by this research. They certainly represent the most important consideration for future research, however.

As exploratory research, a phenomena has been identified relative to managerial participation by manufacturers in the channels of distribution. Unfortunately, the inability to identify the direction of causality greatly limits the extent to which practically-oriented implications can be drawn. Suffice it to suggest that greater manufacturer (or designer) involvement in the channels of distribution would seemingly and logically be a necessary condition for improved channel operations. If the managerial planning process is a valid prescription for achieving operating objectives, then it must follow that increases in sales through SB&O's is the result of planned and practiced managerial activities --- in this case by manufacturers across several industries.

The fact that firms from several different industries were represented, however, is not to imply that future research along parallel lines should not isolate and examine similar industry-specific phenomena. It is entirely possible that channel management practices and activities vary significantly between as well as across industries. Owing to the exploratory nature of this research, no attempt was made (nor was it possible given the data here), to differentiate intra-industry responses. However, before any comprehensive set of prescriptive channel management practices can be identified, the operating characteristics of existing channels of distribution will have to be more fully explored --- both in intra- and in inter-industry levels. This research has attempted to take yet another step.

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## SWAP MEETS--FUN AND PROFIT: THE RETAILING INSTITUTION OF THE 1980s

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### Abstract

In this article the authors explore the nature of swap meets as a developing form of retailing in the United States. Several environmental factors are examined as they may account for the growth of swap meets into a widely acceptable institution of retailing.

Several authors of academic and industry publications recently have been exploring the nature of the changing environments and their impact on marketing institutions. (Hanna et al., 1975; Kotler, 1974; Levitt, 1977; Brown, 1977). One area that has received considerable attention is retailing. Over the past decade, academicians have been seeking explanations for existing phenomena while making a courageous attempt at predicting the future of the retail industry utilizing conceptualizations such as The Wheel of Retailing (Hollander, 1960), The Dialectic (Maronick and Walker, 1974), Vaccum Theory and similar others. (McCammon, 1977.) The basic purpose of this effort has been to identify patterns of retailing methods and institutions that could be more functional for a given time and place.

This preoccupation with aggregate patterns of retailing methods and institutions, in part, has been responsible for a myopia that prevails in the retailing literature. This myopia has caused writers to ignore some ideas that either have never been tried, or been tried and worked, yet were not popularized for being out of the mainstream of retailing thought or practice. In a recent workshop on Retailing (Marketing News, July 13, 1979), Hollander criticized the process of trying to discern patterns of retailing. Such a process, he said, "is somewhat like lying on one's back in a meadow and watching for familiar shapes in the clouds floating overhead. It is interesting work but highly subjective." (p. 10.)

Most writers in the field would accept the definition of a retailer as "a type of middleman who buys and sells for final consumption," (Gwinner et al., 1977). However, no textbook or publication known to these authors addresses types of retailing such as flea-markets or the more organized swap meets that have gained acceptance in some parts of this country as regularly attended shopping places. Both of these are bonafide types of retailing that have been excluded from and ignored in the retailing literature.

The purpose of this article is to explore the nature of swap meets as a developing form of retailing in the United States. It also examines some of the possible theoretical underpinnings for the current emergence and growth of swap meets in light of the prevalent changes in the environments surrounding business.

The discussion presented in the following section is based, in part, on the authors observations of swap meets in a major Southwestern city, and on interviews conducted with buyers, sellers, and managers of various swap meet operations. In a later section, the authors explore some environmental factors that may account for the growth of swap meets into a widely accepted institution of retailing.

### The Nature of Swap Meets

One of the earliest forms of retailing in the United States was the outdoor Trading Post (McNair, 1976). This method of exchange spread across the country as settlers traveled west in search of a place to put down their roots. These intermittent local markets and fairs provided a place for the early colonists where they could sell those items they carried that could be sold or bartered to buy their needs. It was also a place where news of happenings elsewhere was communicated. For many, it was their one form of recreation and amusement; a meeting place to interact with neighbors and those passing through.

Today's swap meets are also outdoor markets; however, they are more structured and in many ways are an ingenious idea whose time has come again. At these markets individuals sell, trade or exchange antique, new and used merchandise. A glance at the telephonedirectories of several Southwestern and Western cities indicated that a number of swap meets exist in this region. All of these are established retailing institutions and in some cases they are part of chains of "Super-Swap Meets" operating in several states. Some cities (i.e., Phoenix, AZ, and San Bernardino, CA, and San Fernando, CA) have already passed ordinances to govern this mode of business. Thus giving it recognition as a retailing institution, a fact that has not yet been accomplished in the marketing or retailing literature.

Swap meets are most often conducted in enclosed (fenced) areas with ample space for parking and a designated area for selling. Admission to these swap meets for consumers usually consists of a fee for parking, ranging from \$.50 to \$1.00. Sellers are charged a fee based on some combination of square feet of selling space, services desired (tables, power, water, etc.), and the day of the week on which the swap meet is conducted (weekends cost more than mid-week). Reservation of swap meet space is available in most operations and this arrangement is increasing in popularity. Most states do not permit the sale of items such as guns, ammunition, bedding (unless federally inspected), food items (unless it is fresh produce), pets and livestock. Typical of the merchandise sold at swap meets are collectors items, household items, fabrics, books and magazines, records and tapes, electrical appliances, wigs, antiques, bottles, jewelry, plants, fruits and vegetables, and automobiles.

Traditionally most of the sellers are household members who are there to sell, trade, or exchange some of their possessions. It is not uncommon, however, to find the well established merchant who takes advantage of the low overhead of a swap meet to gain exposure to weekend buyer traffic that may range up to 50,000 people.\* Some of these merchants appear regularly in the same spot every week through a monthly space rental contract available at most swap meets.

Recently, some major manufacturers of consumer products have started advertising to potential swap meet sellers who are looking for sources of merchandise to sell in

\*This figure represents the typical weekend traffic at Park-N-Swap in Phoenix, AZ.

these markets.\*\* This is another indication of the growing recognition of this unconventional retailing institution.

Swap meet managements have regularly been upgrading their services to compete more effectively with other conventional retailing institutions. Modern restrooms, concession stands, check cashing and change, electricity, public address systems for announcements and advertising, information booths and security are just some of the customer and seller services now available at most swap meets. Demand on the part of both buyers and sellers and competitive pressures have caused many swap meet operations that used to be open only on the high traffic days of Saturday and Sunday to be open at least one evening during the week as well.

In this section, the authors have described the nature of swap meets as a growing retail phenomena. The following section explores some of the environmental factors that may be responsible for this growth.

#### Environmental Factors Impacting On The Growth of Swap Meets

A look back to the past few years reveals some major environmental changes that have impacted on both the consumer and the retailing industry. In this section, the authors discuss six trends that might explain the growth of swap meets as a nonconventional method of retailing.

#### The Psychology of Stagflation

The 1970s marked the beginning of an era of shortages that have changed the American way of life in many respects. Shortages in energy sources and raw materials have driven up the prices of several commodities and in some cases have made certain products totally unavailable. This has also resulted in the quality of some services being less. Additionally, some services have been eliminated to cut costs and keep down prices (i.e., air and paper towels in service stations). Spiraling inflation accompanied with a threatening recession have driven many consumers into a waste-minimizing lifestyle and an energy conservation ethic (Berry, 1979), both of which make the idea of a swap meet an attractive one. Consumers who might have formerly disposed of a used product by giving it away or throwing it away, now find their way to a swap meet to "sell" that item. In the same manner, households in need of a product do not hesitate to investigate the used-goods market or a swap meet where it is perceived that products are sold for less. (Conn, 1978.)

The concept of swapping or exchanging seems the answer for scarcity and shortages. As shortages become more acute, the idea of such an unconventional retail institution as a swap meet may become more readily accepted. The retailing industry has not been all together unaware of the change in consumer buying behavior. It did offer the consumer alternatives such as the food/clothes warehouse, the cart-to-car store, cooperatives and similar institutions that have cut back services and costs in an effort to keep prices down and meet customers' needs (Bates, 1977.) Swap meets operate on the same principles, but provide a nonconventional marketplace that may be less wasteful than other established retail institutions. One could be safe in predicting a growth in the number of swap meets across the country as consumers find themselves with less and less buying power to work with and as commodities and other resources become more scarce.

\*\* Such ads appear regularly in the "Penny Saver", a weekly advertising paper published in Arizona.

#### The Psychology of Socialization

From the consumer standpoint there are two lines of thought on the nature of the shopping activity. One school of thought suggests that shopping is an undesirable activity that consumers would rather not participate in if they have a choice. (Bloom, 1978, May 1979.) Supporters of this view seek to minimize the time and effort a consumer needs to spend in a store. Many stores are laid out in such a manner that consumers can have an easy access to all merchandise on a self-service basis. Shoppers in such stores are programmed to go through the aisles, pick up what they want and head for the check-out. Very little, if any, social interaction is thought to take place on such shopping trips.

The second school of thought emphasizes that human beings are social beings, and that shopping is a pleasant socializing activity. This line of reasoning suggests that some people might go on a shopping trip to socialize, have fun, and interact with others who are involved in the same activity. (Mason and Brooks, 1974.) This desire for socializing and interaction seems especially strong among swap meet shoppers who spend several hours just looking around and talking to others they meet. Being a throwback to the style of the early trading posts and general stores, the swap meet seems to be the natural retail institution to serve the need for socialization.

#### The New Demographics and Life Style

Many changes have taken place in the composition and structure of the population in this country. "The family" and "the family life cycle" recently have been subjects of interest to several authors. (Schlacter et al., 1979, Murphy and Staples, 1979.) The trends indicate that many individuals are choosing to remain single, many are cohabitating, those who get married do not stay married for long, most families are much smaller, and generally speaking the population is older than even before. (Norton and Glick, 1979.) These and other segments of the population may benefit from shopping at swap meets. For instance, recent studies indicate a growth in the number of collectors items among singles and young married couples. Both of these groups can frequently find good buys on the items they want at swap meets. The variety of merchandise at these operations is almost unlimited, and many collectors come to these meets to buy, sell or trade, to build up or get rid of collections of all sorts. Cohabitants may also shop at swap meets in search of low priced used furnishings because of the temporary nature of their relationship. This segment of the population is fast growing across the nation, especially in regions of the country where the attitude of the general public is more tolerant toward the phenomena. (Norton and Glick, 1979.)

Because of the shorter duration of many marriages, there are many more divorced parents who are finding it difficult to make ends meet. As they move from houses to apartments, for example, this segment finds swap meets an ideal place to sell no longer needed items and more particularly, obtain affordable "second hand" merchandise. The last of the aforementioned changes, that of the older population, has created some opportunities for retailing. Very little has ever been done to reach or service the older consumer. This group has greater mobility than ever, more time on their hands than the average consumer, and is greatly interested in social interaction. (Norton and Glick, 1979.) To many such elderly consumers, the swap meet provides an excellent opportunity to get out, look around (without pressure to buy), interact with others and buy necessities if needed. The outdoor environment provides a relaxed

atmosphere away from the rush and confines of the typical retail establishment with checkout lines or the watchful camera lens' peering over their shoulders. A portion of the elderly also face severe financial constraints and thus would find swap meet merchandise more attractive because of the lower prices.

There are other changes in market segments that likely will enhance the growth of swap meets or similar non-conventional retail institutions. Today's consumers, for example, have a diminished store loyalty as well as a diminished brand loyalty. They also seem to use their own standards to assess the desirability of merchants and merchandise (Bellenger et al., 1977). Another change is the variety of acceptable life styles. People living in the same general area may be seen doing "their own thing" rather than "keeping up with the Jones'". (May 1979.) This change may help explain why shoppers at swap meets arrive in cars ranging from a new Mercedes Benz to an old Volkswagon Bug; each buying used items, haggling with sellers for better prices, milling with masses of people, and passing the time of day with strangers.

#### The Psychology of Alienation

A glimpse at the current literature reveals a growing interest by marketers in the subject of Consumer Alienation. (Pruden et al., 1974; Lundstrom and Lamont, 1976; and Allison, 1978.) There are various causes stated for consumer alienation from traditional business institutions. Some of these include high prices, lower quality products, diminished and impersonal services, shortages and deceptive practices.

Considering the problem of alienation, swap meets have a decided advantage over other retail institutions. They are perceived as a meeting place for individuals (vs. big business) who gather to trade, exchange, buy and/or sell some items of value. The truth is, however, that many established businesses have regular booths at swap meets to benefit in part from a low level of customer alienation.

Attendees of swap meets seem to have different motives and different expectations than shoppers at regular retail institutions. A good example is the socializing shopper who may attend swap meets to just look around, watch people, and have fun. Such shoppers are not likely to develop alienation because they can have many of their expectations met with minimum friction. Shoppers at supermarkets, department stores or similar stores expect efficient service and quality products sold at reasonable prices. Variations from the expectation decrease satisfaction, or even lead to dissatisfaction and general alienation. In a swap meet setting, price, quality, and service are not as likely to be the salient factors in the minds of consumers. As consumers feel the pinch of inflation and/or mild recession more and more, the higher the likelihood they will feel this alienation toward organized retail business and the greater will be their interest in and support of nonconventional institutions such as swap meets (Ireland and Besner, 1968). There is every indication that the level of consumer alienation has risen considerably over the past decade (Olson, 1974; Wilkes, 1978).irate consumers everywhere cause businesses millions of dollars in vandalism, shoplifting, and other distasteful behavior. More of this same behavior can be expected in the future for "established businesses," a fact which can make swap meet selling a less risky, more pleasant and appealing alternative for many vendors as well as consumers.

The discussion thus far has centered on environmental factors that have brought about the increased interest in and support of swap meets by consumers. Some of

these same factors could also be thought as being responsible for the increased sellers' participation in swap meets. There are, however, two more factors that have a great impact on the sellers' support of swap meets: the lack of government control or regulation and the low cost of operation. Each is discussed below.

#### Lack of Government Regulation

One of the major problem areas for modern retailing and other business institutions is the increasing control and regulation by governments at all levels (U.S. News and World Report, 1975). This excessive regulation costs business large sums of money every year, a fact that has contributed to the decline of small business. As conventional retailers continue to be bogged down with all the reporting they are required to make to various governmental agencies, the swap meet seller escapes this hassle with only token requirements for reporting. Sellers are often required to fill out a police department report that indicates the nature of the items sold or exchanged. This report is all that is required of sellers in most cases, and the reason for this is an effort by the police to monitor the trading or selling of stolen merchandise.

To date, the Internal Revenue Service has taken a very relaxed approach toward swap meets. Swap meet ordinances in most cities are written with the occasional seller in mind, and this provides a shelter to the regular seller who benefits from the absence of regulation. Some city ordinances require individuals who sell at swap meets more than three times a year to acquire a city and state sales tax license. This requirement, however, is not closely monitored, thus offering the sellers at swap meets a distinct advantage over sellers operating out of conventional retail outlets. Managements of swap meets have somehow been able to maintain a low profile for these outlets. This low profile has thus far succeeded in keeping public officials from regulating swap meets. As long as the level and degree of regulation remains minimal, more sellers will frequent swap meets on a more regular basis.

#### Low Cost of Operation

Sellers at swap meets escape practically all fixed costs associated with doing business. They have no long-term lease for building or equipment, nor do they pay some fixed percentage on each unit sold. Utilities are often a part of the daily fee and if incurred impact only on selling days. Further, they seldom have any advertising expense, and since they operate on a cash-and-carry basis there is no bad debt expense as well. All these savings allow for higher profits, even at lower prices to consumers. This fact has provided sellers with the opportunity to better serve some poorly served segments of the population and to help meet some consumer needs that many conventional retail stores have ignored.

#### Conclusion

This article has explored the nature of swap meets as a growing form of retailing and has discussed some of the variables that may account for the growth of this phenomenon. The growing conservation ethic and waste-saving behavior of consumers are changing the ways people shop for and dispose of products they no longer need. The swap meet presents a new alternative for these types of shoppers. A strong feeling of alienation against business could also explain the support some consumers give to swap meets as opposed to established retailing institutions. It is also proposed that changes in demographics and buying behavior make swap meets acceptable shopping markets for people of different age groups and life styles. Swap meets, in their resemblance to

carnivals or fairs, appeal to young and old as low-cost outdoor socializing events. The lack of serious government regulation at swap meets provides them with differential advantages that are magnified by the low cost of operation. All of these variables appear to be having the effect of assuring swap meets continued existence and success as nonconventional retail establishments.

It is possible that swap meets may lose their competitive advantage as they more and more get to look as extended outdoor shopping plazas lined with regular sellers of the same merchandise sold everywhere else. If so, swap meets, like other forms of retailing, may change and move up the wheel of retailing. The general concept which is a rejuvenation of the original form of retailing seems more in line with the nature of today's environments. In this sense, the phenomenon represents a completion of a full cycle of the wheel of retailing often recognized by marketing scholars.

Some empirical research is needed to identify the demographic and psychographic characteristics of swap meet shoppers and the reasons they shop at swap meets. Of interest to marketers would be a comparative analysis of consumer satisfaction or dissatisfaction with swap meet shopping experiences as opposed to experiences with conventional retailing outlets. Such research would not only help marketers to better understand the swap meet phenomenon but would also alert them to any similar phenomena that might occur in the market place.

The authors join Hollander in calling on marketers to stop the cloud-watching in search of new clusters or patterns of retail institutions and instead to observe, evaluate, and report on ideas that may have never been tried, or ideas that may have been tried but have not been popularized for whatever reason. In an era where nothing but change is certain, the uncommon rather than the common may be what deserves more of our attention. It is time to broaden our scope and begin the study of phenomena such as swap meets, flea markets, garage/yard sales, and other similar nonconventional institutions that facilitate the exchange of economic goods and services.

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USING THE PRICE/QUANTITY MODEL TO INDICATE  
POWER IN MARKETING CHANNELS

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Abstract

The literature of vertical channel power reveals a noticeable neglect by academics of how pricing strategy evaluations can help to better understand vertical channel relationships. This paper builds a conceptual framework which helps visualize the effects of power on the marketing channels via pricing strategies.

Introduction

It is evident from the abundance of literature\* that the concept of power has become a central issue to marketing channel theorists. Robert Dahl (1963) suggested that power can be thought of as the ability to make someone do something that he would have otherwise not done. Using this notion of power, El-Ansary and Stern (1972) operationally define the power of a channel member as, "...his ability to control the decision variables in the marketing strategy of another member in a given channel at a different level of distribution." Typically most studies on power have been concerned with:

- a) viewing power as the cumulative magnitude of one's various sources (i.e., coercive, expert, referent, legitimate, reward) (Hunt and Nevin, 1974), (French and Raven, 1968);
- b) the controversy as to whether power is a constructive or destructive force (Assael, 1969), (Mallen, 1967);
- c) the countervailing forces in the marketing channels (Etgar, 1976) (Galbraith, 1967); or,
- d) the quantifying and measurement of power - most viewing power as the dependence and/or control of one channel member on another channel member (Brown and Frazier, 1978), (El-Ansary and Stern, 1972), (Lusch, 1976), (Rosenberg and Stern, 1971).

Although these methods have gone through the full spectrum of analysis (from theory to calculus models), they still reveal too little in terms of understanding channel power, thus a new approach is necessary.

This study differs from most previous studies in its perspective of the importance of the various power bases. It is herein assumed that specific sources of power, however interesting to isolate and examine, are unimportant for the purpose of understanding the general mechanism, and assessing the effects of power on channel relationships. This assumption, of temporarily neglecting the nature of the power source, is practical when one considers the multitude of combinations of power sources that might have to be investigated. What is needed is a more general approach that explains the mechanism of power. This paper introduces a model which reveals a reliable and valid indicator of power. This indicator is found in the process that is part of all systems of exchange - that is, pricing strategies.

\*An expanded version of this paper with more extensive bibliography is available from the authors upon request.

Conceptual Framework

Rationale for Economic Approach

Power in marketing channels has been studied from many different perspectives. From an economic perspective the actual exercise of that power, through the price/market mechanism can be explicitly portrayed. Only from a socio-economic perspective can we understand not only the effects of power on the major actors in the channel but its effects on society as a whole. Marketing, in most contexts, regards its inquiry as more realistic than economics, eschewing formal theory, very often, in favor of measurement and empirical verification. However, in the words of Bertrand Russell (1971),

"Economics as a separate science is unrealistic, and misleading if taken as a guide in practice. It is one element - a very important element, it is true - in a wider study, the science of power".

The marketing "channel of distribution" is often viewed as a "system of exchange". It is indeed unfortunate, however, that the vertical aspects of channels have been virtually left out of economic theory, except for static market structure price determination. This has been the case because economic analysis did not take into consideration the nature of the role of the middlemen. Economists have also labelled the effects of advertising, legal regulation, etc., as 'market externalities'. These two factors are precisely the grounds on which many marketers have dismissed the usefulness of economic analysis. Not only did economic analysis not include middlemen's actions, it also excluded the effects of marketing on imperfect markets.

Two points must be considered at this time. First, Hawkins (1967) has developed an economic approach which includes the middleman in the price/quantity model. With this approach, he introduces the concept of bargaining, which has been heretofore absent in economic literature (see Figure 1). The second point is the major justification of this paper. Economists have traditionally viewed a system of exchange as a relationship that exists between a buyer and a seller. The exchange was defined by the classical price/quantity model, and was ultimately determined (defined) by the conditions of supply and demand. However, since the concept of bargaining has been introduced, one must now consider a third condition which will ultimately determine price - that is power.

While economic theory is relatively uncomplicated, the real world is not. There are many types of relationships that may occur in an economic market, and it is therefore useful to classify market conditions based on the degree of horizontal competition any member in a vertical channel faces, at all the different levels. Mallen (1967) and Hawkins (1967) have cited many different possibilities, such as: a monopolistic competitive seller with purely competitive buyers; purely competitive sellers with a monopsonistic competitive buyer, which in essence is the scenario discussed in Galbraith's theory of countervailing power (1954).

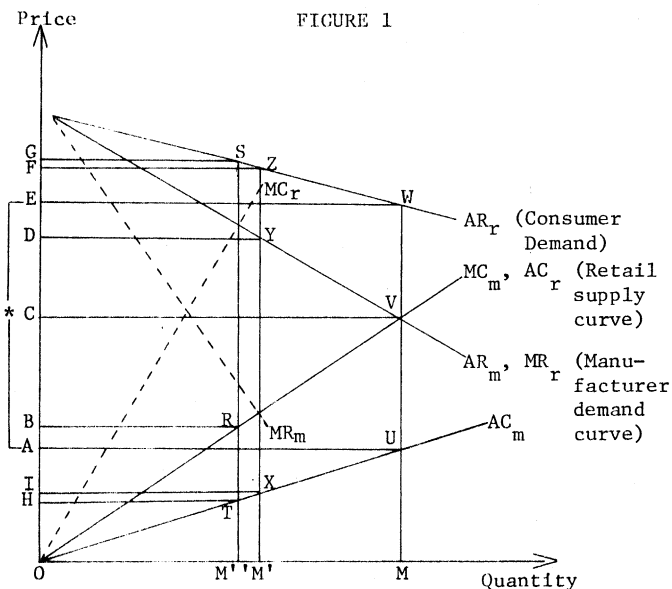
Due to the growth of large retailing chains which were forced to respond to the power previously held alone by large manufacturers, many industries now have powerful countervailing forces on both ends of the channel. Since this is presently a common phenomenon, it will be used in part to explain and illustrate the model developed in this paper.

Generally speaking, when sellers are more powerful than buyers, they can sell their products at such a price that the latter's margins upon reselling would be minimal - the sellers reap all the 'pure' profits in the channel. Alternately, if the buyers are more powerful than the sellers, they can purchase the goods at the lowest price that just allows the manufacturer to remain in business - the buyers reap all the 'pure' profits in the channel. When both the seller and buyer have relatively equal strength, an interesting phenomenon occurs - the art of pricing.

This sets the stage for the present study, which is a conceptual, theoretically-based set of paradigms which examine the nature of "channel-of-distribution" power through the price/market mechanism. The authors examine the usefulness of the model using an empirical study of the relationship between small independent Canadian retailers and their suppliers.

#### The Model

In Figure 1, we see an economic illustration that explains a vertical channel relationship. For purposes of clarity it incorporates only one middleman, nevertheless, the analysis could easily be extended to any desired dimension. Figure 1 illustrates that manufacturer demand prices  $AR_m$  are established by the retailer's demand curve  $MR_r$ , whose demand prices  $AR_r$  will ultimately be established by consumer demand.



Source: Adapted from E.R. Hawkins, "Vertical Price Relationships" in "The Marketing Channel: A Conceptual Viewpoint", B. Mallen (ed.), New York: John Wiley and Sons, Inc., 1967.

It is evident from the model that under the conditions of countervailing power there is a minimum and a maximum price at which goods can be sold between channel members (i.e., exchange price). From Figure 1, one can see that the minimum price at which a manufacturer can sell quantity M (the jointly agreed quantity) to the retailer is price A, derived by the average cost curve of the manufacturer ( $AC_m$ ). This price is just enough to keep him in business<sup>m</sup>. The maximum price that a manufacturer could sell the goods to the retailer is price E, that price which is the most the consumer would be willing to pay. Since pricing at exactly E would effectively allow no margin to the retailer, one would intuitively ask the question, 'why use the retailer'? If the manufacturer attempted to bypass the retailer in order to sell directly to the consumer, he would have to assume all retailing costs as well as the manufacturing costs, which would change the  $AC_m$ . Therefore, in order to lend reasonableness to the model the manufacturer must sell the goods at a price marginally greater than A. However, there is a broad range of prices at which the exchange can take place, represented by the 'Area of Bargaining' between prices A and E.

From Figure 1, one can see how economic analysis can be useful in terms of understanding the effects of power on channel relationships. Quantity OM represents that quantity of goods at price E that maximizes the total revenue from the consumer, at the point of intersection of  $MC_m$  and  $MR_r$  (i.e., intersection of supply and demand curves). It is obvious that the manufacturer would prefer to sell quantity OM' at price D (equating  $MC_m$  to  $MR_m$ ), which would maximize his profit. However, if the market situation is one of monopolistic competition/monopsonistic competition, both will realize that the optimal decision would be to maximize joint profits.

When price C is the exchange price, there is a balance in the channel - a power tradeoff. Price C is where both maximize joint profit, and neither has a decided advantage over his channel partner. In other words, neither is exerting power. When the exchange price is above or below price C, one of the channel members is exerting power. When the exchange price is in the range of C to E, the manufacturer would be considered as the more powerful actor (assuming that power is the ability to influence the marketing strategy of other actors in a vertical channel).

#### Price as an Indicator of Power

Much can be said concerning the exchange price in a vertical channel. The closer a manufacturer prices  $AC_m$ , the less is his influence on the channel. As the exchange price moves toward the final retail price, the stronger is the influence of the manufacturer. For the following analysis, in which there is only one middleman, when the manufacturer is said to be stronger, the implication is that the retailer is weaker (i.e., exerts less influence on the strategies in the channel) and vice versa. Weak and strong are viewed in terms of power, i.e., the ability to change the marketing strategy of another vertical channel member.

#### Illustration of the Model

To illustrate the many possible pricing strategies that can be employed in a vertical channel, we examine the case of the powerful manufacturer, the powerful retailer, and the case when both have relative equal strength. Although manufacturer and retail strategies are of obvious importance, one cannot exclude consumer demand if the analysis is to have any practical value. In addition to channel pricing strategies, two types of consumer demand will be illustrated: that of a down-



ward sloping curve, and the market condition where the retail price is fixed. Retail prices would be fixed at a certain or given level when the consumers of Product W, for example, do not believe that it is that much better or differentiated from other products, and would not be willing to pay higher prices for it (oligopolistic competition).

It must be understood at the outset that when a manufacturer raises his price to retailers, or when retailers lower the price they will pay to a manufacturer, one is witnessing more than simple bargaining. When a manufacturer raises prices to retailers, he is in fact lessening the steepness of his demand curve ( $AR_m$ ) forcing it upwards. When a retailer can pay less than the price economics would dictate, he is lessening the steepness of his supply curve ( $AC_r$ ), forcing it downwards. The effect of the manufacturer forcing up his demand curve is to allow him to charge higher prices to the retailer. The effect of the retailer pushing down his supply curve is to allow him to pay less for his purchases.

The key point is that price changes are the result of repositioned supply and demand curves. These curves do not just move, they are shifted, forced to a new position by the powerful actor(s) in the channel. Hence, when the channel exchange price rises or declines, one is witnessing an act of power. The greater the difference between the actual channel exchange price and price C, the greater is the power that is being exerted by one of the channel members.

#### Scenario 1: The Powerful Manufacturer.

When the manufacturer is strong enough (and knowledgeable) he will always attempt to equate marginal cost ( $MC_m$ ) and marginal revenue ( $MR_m$ ) to determine quantity and price. **Figure 1** shows the profit that would accrue to the manufacturer who equated  $MC_m$  and  $MR_m$ , when faced with a downward sloping demand curve, selling a differentiated product. Equating  $MC_m$  and  $MR_m$  offers him profit of I-X-Y-D. The profit that the retailer would obtain under these conditions is D-Y-Z-F. It is evident that the manufacturer is obtaining the lion's share of the profits.

If the manufacturer has extensively greater power, relative to the retailer, he could produce quantity  $OM'$  (equating  $MC_m$  to  $MR_m$ ), but sell that quantity at a higher price to the retailer, actually forcing the retailer's marginal revenue curve to the right (upward). **Figure 2** illustrates the effect on both manufacturer and retail profit when the  $AR_m$  ( $MR_r$ ) is forced upward. As the manufacturer raises the price (maintaining the same output) retail profits decline, until they are at a minimum. The manufacturer can continue to price in this manner as long as the retailer has no better business alternative. It is logical to assume that the manufacturer will allow the retailer certain profits in order to stay in business. If one conceptualizes the shaded areas as the measures of power (instead of profits), one can see that pricing strategies are good indicators of power. As the manufacturer forces  $AR_m$  to  $AR_m'$  and eventually  $AR_m''$ , the retailer is caught in the position of having to absorb the price increase himself. Thus, the retailer's power (and profit) is reduced as the manufacturer exerts his strength. In effect, retail power (and profit) is inversely related to the manufacturer's selling price.

Another course of action is open to the manufacturer when his product is not highly differentiated from other products, and the retail price to consumers is (in effect) fixed, due to competition (oligopolistic competition). Since the price is fixed at the 'market level', the manufacturer will produce that quantity

which equates  $MC_m$  to  $MR_r$  since this will extract the greatest total revenue from the consumer. However, if the manufacturer is strong enough to shift the  $AR_m$  ( $MR_r$ ) to the right, he will raise the price to the retailer without affecting the final price to the consumer. The effects of forcing the  $AR_m$  to  $AR_m'$  and eventually  $AR_m''$  are shown in **Figure 3**. The smaller the shaded area in **Figure 3** becomes, the less power the retailer has. The higher the manufacturer raises the price, the more evident is his ability to change the marketing strategy (demand) of the retailer, and thus, the more evident is his power.

#### Scenario 2: The Powerful Retailer (Dominating Power).

As was the case of the manufacturer, the retailer will equate  $MC_r$  to  $MR_r$  when he has the knowledge and capability of doing so. **Figure 1** illustrates the respective profits earned by the retailer and manufacturer when the retailer attempts to exploit the manufacturer, which are B-R-S-G and H-T-R-B respectively. This graph shows that the retailer prefers to buy quantity  $OM''$ , with a corresponding higher retail price of G. In this scenario, the retailer reaps most of the profits from the channel, leaving much less for the manufacturer. If the profit areas are once again conceptualized as measures of power, the retailer is now exerting more strength relative to this channel adversary.

When the retailer is much more powerful than the manufacturer, he can force the manufacturer to sell quantity  $OM''$  at a lower price than B. **Figure 4** illustrates what happens to the profits and power of the manufacturer as the retailer forces the supply curve ( $MC_m$ ,  $AC_r$ ) downward, to the point where the average costs of the retailer is shifting  $MR_r$  to the left (downward) and  $MC_r$  to the right (downward), which lowers the  $AC_r$ . The accompanying slope of the  $MR_r$  ( $AR_m$ ) is steepened, representing a more monopolistic demand situation.

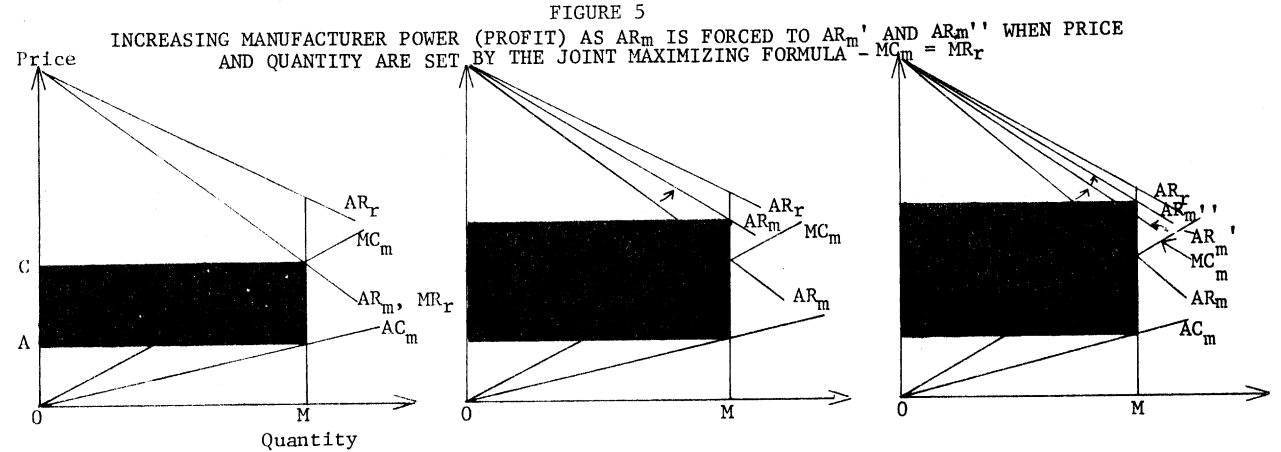
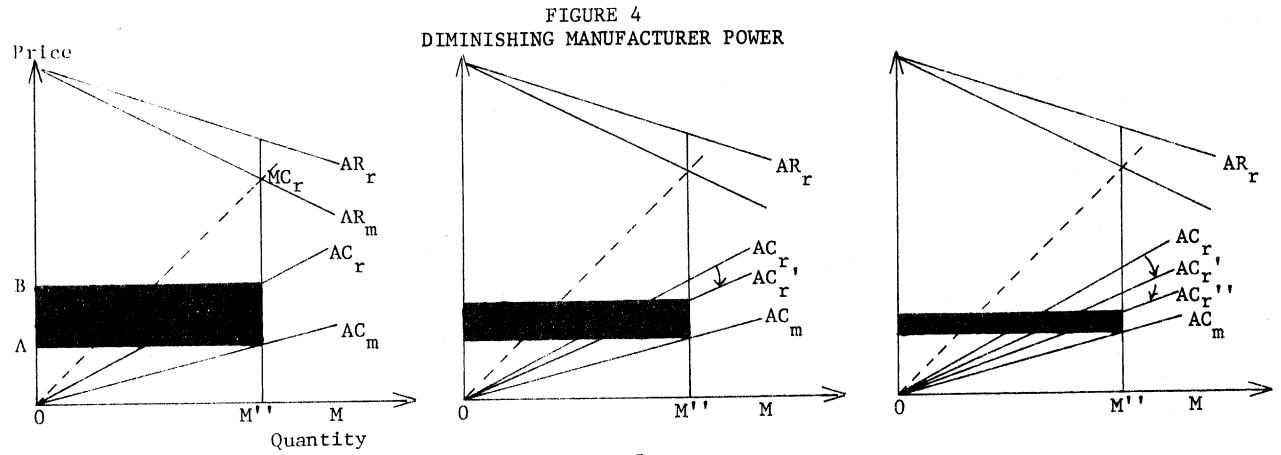
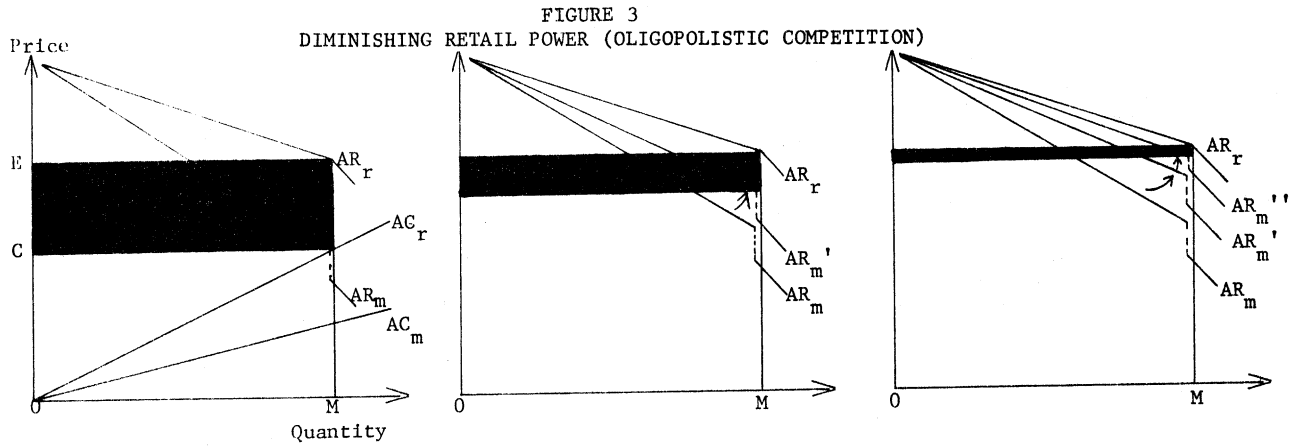
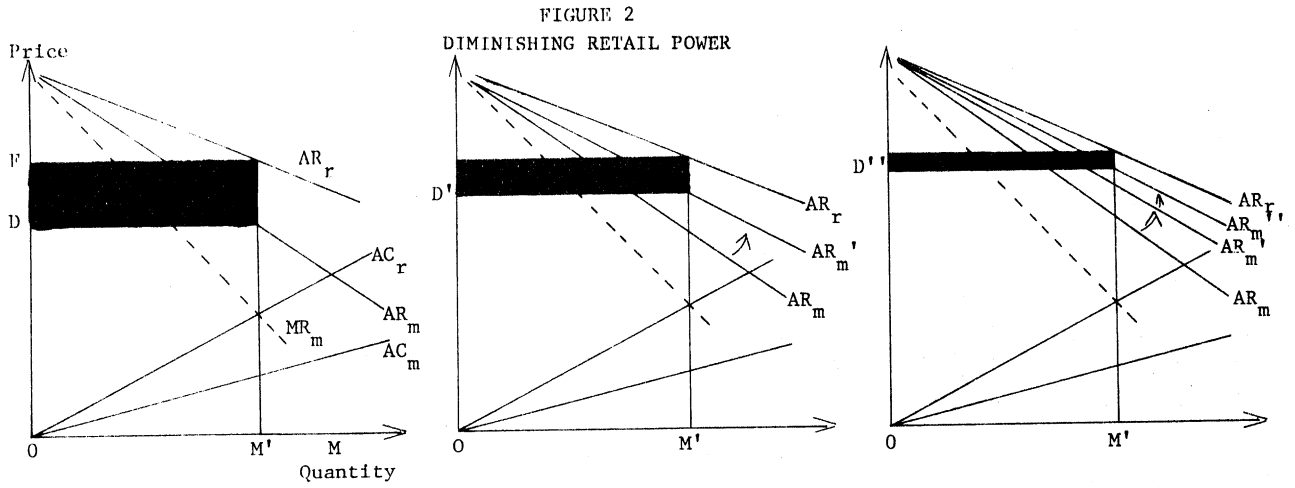
The manufacturer will sell quantity  $OM''$  to the retailer at a price marginally higher than that of his average cost, as long as he perceives no better business alternatives. Once again, it has been illustrated that the power of any vertical channel member is inversely related to the exchange price of the goods, and that power can be visualized as the profit area in a price/quantity model.

When the environment facing the retailer is one of oligopolistic competition, in which retail prices are very competitive, or even fixed, the retailer will want to purchase quantity  $OM$  (reasons are the same as in Scenario 1). However, if the manufacturer cannot extract price C (**Figure 1**) from the retailer, the latter can force the  $AC_r$  curve downward and buy the goods at lower prices, and still be able to resell them at the going market price.

#### Scenario 3: Manufacturer and Retailer (Countervailing Power).

"To begin with a broad and somewhat too dogmatically stated proposition, private economic power is held in check by the countervailing power of those who are subject to it. The first begets the second. The long trend towards concentration of individual enterprise in the hands of relatively few firms has brought into existence not only strong sellers, as economists have proposed, but also strong buyers as they have failed to see. The two develop together not in precise step but in such a manner that there can be no doubt that one is in response to the other". (Galbraith, 1954)

Galbraith (1954) introduced the concept that competition which is supposed to be the force behind the



'automatic regulator' in the market place, has in certain situations been replaced by the 'countervailing power' of large buyers. This concept actually extends beyond the mere study of distributive channels but also to the rise of powerful trade unions, big government, etc. In theory, it results in lower retail prices, an increase in general social welfare, and greater efficiency. This may not be true in its entirety. Several economists, notably Hunter (1971) have demonstrated that multiple line retailers tend to develop in size mainly in order to exploit economies of scale in organizational and merchandising techniques. Such scale economies certainly do include those of buying advantages which can begin to make the case for countervailing power. These retailers can negotiate prices and terms to the advantage of themselves vis-à-vis their competitors. Usually size of purchase makes the appropriate discount available which the small retailer prices. The variety chain store which has really developed since the early 1950's has a different orientation. These operations (e.g., Sears, Marks and Spencer, J.C. Penney, etc.) have channel integration and/or control as one of their strategic goals. These stores usually operate with a standardized, though wide, line of merchandise, standard layout and store style, a national catalogue or mail order operation as well as directly hierarchical organization, training and financing programs. These stores can and do exercise "countervailing" and sometimes "dominating" power.

Figure 1 shows the power (and profit) of both manufacturer and retailer when both perceive that they cannot affect, to any great extent, the marketing strategy of the other, which are A-U-V-C and C-V-W-E respectively. When this state is reached, the power as illustrated by the rectangular region A-U-W-E, is equally shared by both. However, as the manufacturer attempts to raise the exchange price (Figure 2), or as the retailer attempts to lower the exchange price (Figure 4), the power bases shift. As Figure 5 illustrates, as the manufacturer exercises his power, shifting  $AR_m$  to  $AR'_m$  and ultimately  $AR''_m$ , the shaded area gets larger, and the retailer pays the price, yielding his position of equality, or seeks new business opportunities.

#### An Empirical Study

This study was conducted in February 1980. Sixty-two manager/owners of small independent Canadian retail outlets furnished responses to a mail questionnaire asking for their opinions on a number of issues concerning the relationship between themselves and their suppliers. The retailers were asked to respond to statements concerning the power that a manufacturer derives from using specific 'brand names'. The study (Wieskopf, 1980) revealed strong agreement with the following propositions:

- 1) the retailer is willing to pay a premium price (10% more) for a brand name;
- 2) the retailer is more willing to pay a premium price when the manufacturer provides financial assistance;
- 3) the retailer considers quality, fit, price, total product mix, and other service variables as important as brand name;
- 4) as retailers use more brand name products, they expect more marketing services from the manufacturer, such as advertising, personal business advice, merchandising assistance, etc.; and,
- 5) as retailers use more brand name products they tend to rely on and expect better credit provisions from the manufacturer.

TABLE 1  
MANUFACTURER POWER SOURCES

Power Variables	Literature Terminology
manufacturer stipulation of order size	legitimate
manufacturer stipulation of delivery	legitimate, coercive
manufacturer freedom to alter order composition	legitimate, coercive
manufacturer ability to dictate price	legitimate, coercive
manufacturer provision of business aid	expert
manufacturer provision of merchandising assistance	expert
manufacturer willingness to collect receivables	legitimate, reward
riskiness of changing suppliers	reward, identification

#### Implications

The results of the survey indicate that a majority of the retailers that responded exist in an environment depicted by our first scenario, i.e., the powerful manufacturer. The dominating characteristics of this scenario are that the manufacturer can stipulate order size (quantity), alter order composition and dictate price. Due to the extent of these manufacturers' power basis, one cannot conclude that brand name alone is the most important or relevant power source. Credit availability, financial assistance as well as the offering of other marketing mix variables are as important to the retailer as brand name. This gives substance to our position that to attempt to identify and quantify all power sources, especially in the scenario of a dominating channel member, would be a wieldy task. However, there is a set of variables that are cited as major power sources of the manufacturer which can be identified and quantified. These variables are the manufacturers' ability to dictate price as well as quantity. In our terminology (Figure 2), this is the ability of the manufacturer to choose to produce and sell quantity  $OM'$ , at price  $D$ , or  $D'$  or even  $D''$ , depending on the degree of his strength. Moreover, the relative strength of the manufacturer in relation to the retailer can be measured using the actual exchange price and the corresponding profit areas as the indicator. In our study, the willingness of the retailer to pay a premium of 10% for a brand name product (which is the willingness to allow the manufacturer to control the decision variable 'acceptable price' - i.e., the shifting of  $AR_m$  to  $AR'_m$  to  $AR''_m$ ) as well as the willingness of the retailer to allow the manufacturer to stipulate quantity without the usual corresponding alterations in price level, is a clear economic example of extreme dominating manufacturer power.

#### Conclusion

We have demonstrated that in a vertical marketing channel, the extent to which a channel member can shift the demand and supply curves of another member is a good measure of one's power. A good indicator of this power can be seen in pricing strategies of the classical price/quantity model. Hence, power can be viewed as the ability to reduce the rectangular profit area of another member, by forcing that member to alter his marketing strategy. As always, when one attempts to practically apply theory to the real world, many assumptions must be made. This analysis assumes that each firm has the ability to estimate cost, supply and demand curves, and that every actor in the system is a profit-maximizing firm.

Power is a direct consequence of the ability of a market actor to shift his demand or supply curves exogenously. Usually this benefit accrues to the particular actor himself. What we see, then, is that the relative ease of portraying economic events can perhaps lead to a different understanding of social relations. Thus we try to interpret social interactions between channel members by the economic impact of those actions. Admittedly we have ignored the possibility that the drive to power is possibly satisfied by economic means itself; thus completing the circle - power feeds power! Rather, this analysis was confined to a synthesis and review of the notion of the economic consequences of channel power.

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DEMAND CHARACTERISTICS AS DETERMINANTS  
OF BEHAVIOR: AN UNCONSCIOUS EFFECT

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Joseph A. Bellizzi, Colorado State University

Abstract

The environmental setting and the willingness to participate in a study may contain within themselves enough information to unconsciously influence the performance of subjects. A 2 X 2 factorial experiment to test these hypotheses is reported. Results support both hypotheses.

Introduction

An extensive body of literature has accumulated concerning demand artifacts in behavioral research (Rosenthal and Rosnow, 1969). Only recently have consumer researchers (Sawyer, 1975; Reingen, 1976) concerned themselves with Orne's (1962) proposition:

...a subject's behavior in any experimental situation will be determined by two sets of variables: (a) those that are traditionally defined as experimental variables and (b) the perceived characteristics of the experimental situation.

The latter variables, demand characteristics or artifacts, are additional unspecified factors that may affect a subject's performance in an experiment and thus pose serious threats to both internal and external validity (Campbell, 1957).

What are these unspecified determinants and how do they affect performance? Initially, Orne (1962) identifies them as the totality of cues which cover an experimental hypothesis to the subject. Later, Orne (1969) gives recognition to the influence of a subject's role when he states:

"Insofar as the subject cares about the outcome, his perception of his role and of the hypothesis being tested will become a significant determinant of his behavior."

According to this perspective, the totality of cues influence behavior when three conditions are met. First, the cues, to have any influence, must be perceived by the subject. Second, these perceived cues must convey an experimenter's hypothesis. Third, the perceived cues must define the role of a subject because the response of a subject is a function of the role created.

Empirical research on demand characteristics has focused on these conditions.

Research on the "cues" aspect of demand characteristics has concerned itself with identifying their nature and occurrence in an experiment. The cues that increase the probability that a subject has recognized and interpreted the experimenter's hypothesis have been found to occur before, during and after an experiment.

Rosenthal and Rosnow (1969) suggest that a subject's prior knowledge about an experiment, past experimental experience, and pre-treatment instructions or measurements have the potential of being used to identify an experimental hypothesis prior to the subject's participation in the actual experiment.

Cues that may convey the experimenter's hypothesis during an experiment take many forms. Grice (1966) shows that the use of a particular research design (within-subjects) suggests change to subjects. Silverman's (1968) results show that the atmosphere of the experimental setting is a potential demand characteristic. The use of deception during the experiment (Kelman; 1967), if obvious, generates greater recognition of the experimental hypothesis. Rosenthal (1969) in his study of the experimenter-subject interaction found that the sex, age, race and gestures made by an investigator led to increased awareness of the hypothesis in question. The message, source and content effect on suspiciousness of experimenter's intent has been found to have some effect on the recognition level of subjects (Rosenthal and Rosnow, 1969).

Post-experimental cues may affect a subject's awareness of the intended hypothesis. Upon completion of the subject's participation in an experiment, the inquiry instrument has the potential to suggest an experimenter's hypothesis (Stang, 1974). Further, because subsequent questioning of these subjects often shows an unwillingness to disclose their suspicions, the researcher is, at times, unsure of any demand bias in their performance.

Research on the "role" aspect of demand characteristics has concerned itself with identifying the role a subject may adopt in an experiment. In all cases, it is assumed that the subject is suspicious of the experimental hypothesis.

Orne's (1962) original statements were based on the observations and behaviors of cooperative volunteer subjects. He assumed that the goals of science in general and the success of an experiment in particular were enough to motivate the volunteer to comply with any and all experimental instructions. In this case, the subject might adopt a "good" subject role and confirm what she/he believes to be the experimental hypothesis.

Three other roles with different effects have been identified. In a study to test the effects of deception on an incidental learning task, Fillenbaum (1966) found no significant differences among deceived and control group. This led him to conclude that characteristically a subject is "faithful." Because a subject does not act on his/her suspicions, a faithful subject role occurs. Agryis (1968) suggests that second-guessing and beating the researcher at his own game may be commonplace in experiments. The "negative" subject role occurs when a subject tries to disconfirm the suspected hypothesis by performing in a random or contrary manner. The effects of a fourth subject role was characterized by Rosenberg (1969) as the "apprehensive" subject. This subject approaches an experiment with the expectations that his/her performance will be evaluated. If the subject's initial suspicion is confirmed in the early stages of the experiment, the subject will perform in such a manner that it will result in a positive, or at least no negative, evaluation.

In an attempt to capture the substance of the literature and provide a better understanding of how the totality of cues affect behavior, Rosnow and Aiken (1973) developed an integrative artifact model.



Using role theory and McGuire's (1968) information processing theory of social influence their model states:

"Our central thesis is that there is a trichotomy of mutually exclusive and exhaustive states of behavior (compliance, noncompliance and countercompliance) which can be seen as the end product of three conjoint mediators (receptivity, motivation and capability), and that artifact independent variables affect the ultimate outcomes of experiments by indirectly impinging on the behavioral states at any of the mediating points."

According to their model, demand artifacts will influence behavior only when (1) the subject has adequate reception of the demand characteristics - or perceives the cues, (2) is motivated to respond positively or negatively - or adopts a role, and (3) is capable of expressing the motivation behaviorally. In all other cases, behavior is overtly unaffected by the demand characteristic.

The purpose of this study is to determine if subjects may be unaware of demand artifacts and yet influenced by them. Two demand artifacts, environmental setting and willingness to participate, are operationalized as independent variables and their unconscious effect on performance is examined.

According to the Rosnow and Aiken (1973) model, at the point of reception the major concern is with conditions that affect the subject's adequate reception of information concerning experimental cues and expectations. Accordingly, the artifactual variable environmental setting is chosen and dichotomized to scientific setting and non-scientific setting. At the point of motivation, the second mediator in the chain, the subject's willingness to participate is believed to represent acquiescent motivation, while unwillingness to participate represents counteracquiescent motivation. The willingness to participate is dichotomized to volunteer subject and non-volunteer subject. Finally, at the point of capability, the subject must be able to manifest his motivation behaviorally. To give direction to the subject's behavior a statement of consensus findings concerning the length of a Volkswagen relative to a Grand Prix Pontiac accompanies one of six questions in a survey. The subject is asked to indicate his/her perception of the relative length of these automobiles. The subject may agree or disagree, if so motivated, with the consensus statement and manifest this agreement or disagreement behaviorally.

#### Hypothesis

We know little about how the environmental setting affects a subject's behavior. However, the fact that the physical surroundings suggest "science" should heighten the subject's reception to information. Indirectly, Weber and Cook (1972) provide some evidence that scientific setting is likely to activate a good subject role. The research on non-scientific setting is limited to studies of attitude change. Silverman (1968) did find that subjects are more acquiescent to a persuasive message when it is presented in the context of a psychological experiment than when it is presented in a naturalistic setting. Although studies on environmental setting are few in number, they do suggest that setting may differentially influence a respondent's behavior.

We hypothesize that when subjects are placed in a scientific setting they are more likely to be unconsciously affected by the atmosphere and respond differently than those subjects in a non-scientific setting.

In an excellent review by Rosenthal and Rosnow (1969) the volunteer subject has been shown to characteristically differ from the non-volunteer. However, as the authors suggest, little is known about the effect of using volunteer subjects. Orne (1962) in his study on demand characteristics worked with volunteers. They appeared to be so cooperative that he termed them good subjects. One way of assessing the magnitude of volunteer bias in a study is to use non-volunteers in the same study. That is, although volunteers are solicited, both volunteers and non-volunteers are actually used.

We hypothesize that volunteers are more likely to be unconsciously affected by their perceived role and respond differently than those subjects who do not initially volunteer.

As mentioned earlier, subjects must be capable of expressing their motivation behaviorally. To accomplish this, subjects were asked to indicate the length of a Volkswagen relative to a Grand Prix Pontiac. This question was accompanied by a statement of consensus findings (you might be interested to know that most students believe the VW is 70% as long as the Grand Prix). An earlier pretest on this question ensured us that the subjects were able to estimate 70% of a line with significant accuracy. The dependent variable in this study was defined as the mean of the absolute deviation of a slash (made by  $S_2$ ) from a point that was 70% (105mm) from one end of a line.

Because we sought to measure the unconscious effect of the two artifacts on performance, we had to eliminate those subjects who were capable of "verbalizing" our hypothesis. For the remaining subjects, we interpret a small deviation from 70% as an unconscious attempt to validate the experimenter's hypothesis.

Therefore, hypothesized in this study are the following:

Hypothesis 1: Volunteers are more likely to be unconsciously affected by their perceived role than are subjects who do not initially volunteer. Thus, volunteers are more likely to validate the experimental hypothesis by deviating less from a point that is 70% from one end of a line, than are subjects who do not initially volunteer.

Hypothesis 2: Subjects who are placed in a scientific setting are more likely to be unconsciously affected by the environment than are subjects who are placed in a non-scientific setting. Thus, subjects in a scientific setting are more likely to validate the experimental hypothesis, by deviating less from a point that is 70% from one end of a line, than are subjects in a non-scientific setting.

#### Procedure and Methodology

To establish a benchmark measure, a pretest of 48 subjects' perceptions regarding the length of a VW relative to a Grand Prix was conducted. In addition, to determine how accurately the subjects could indicate various lengths on a line, they were asked to estimate 66 2/3%, 70% and 75% of a line. Based on the pretest, most subjects estimated the VW to be 104.2 mm which is approximately 70% of a 150 mm line. Further, the subjects were able to estimate 70% of a line with a mean absolute deviation of 3.8 mm.

#### Sample

On the basis of a brief request for volunteers made by a graduate assistant (the same person in all cases), subjects were clustered into groups of five and

assigned to either a scientific setting (psychological consultation laboratory) or a non-scientific environment (large classroom). Subjects who did not initially volunteer were also assigned to one of the two settings. The request for volunteers and the instructions given to the subjects were identical. A total of 100 male and female undergraduates were assigned to one of four treatment groups.

#### Procedure

A male source introduced the study as the first part of a two part study designed to identify what they as individuals thought about one topic - the automobile. They were asked to answer questions regarding (1) their experience with any of sixteen named automobiles, (2) most important features considered prior to purchasing an automobile, (3) rank order in importance, fuel-economy, performance, size of car, (4) the length of a VW relative to a Grand Prix, (5) their agreement on one of two statements dealing with the relationship of horsepower and fuel economy, (6) their awareness of advertising campaigns for any of sixteen named automobiles. After the study was completed, subjects were given a post-experimental questionnaire. They were asked about the suspicions they may have had regarding the purpose of the study.

#### Research Design

A 2 X 2 factorial, consisting of two levels of willingness to participate (volunteer vs. non-volunteer), and two levels of environmental setting (scientific vs. non-scientific) was employed. The dependent measure was defined as the mean absolute deviation from a point located 70% along a line (this point was not indicated on the test instrument). A two-way analysis of variance was used to test for main effects.

#### Results

Although the purpose of the study is to measure the unconscious effect of two artifacts, we began with an analysis of 92 usable responses to observe the change in the results obtained from all subjects and from those who could not verbalize our hypothesis. The mean responses for all the subjects is found in Table 1.

TABLE 1  
MEANS OF THE ABSOLUTE DEVIATION  
FOR ALL SUBJECTS

	SETTING		
	SCIENTIFIC	NON-SCIENTIFIC	
NON VOLUNTEER	21.30	16.22	18.76
VOLUNTEER	17.04	23.13	20.09
	19.17	19.67	

An analysis of variance on the mean responses results in a significant interaction effect for experimental setting and willingness to participate ( $F = 5.7526$ ,  $p < .01$ ). The main effect for both artifacts is not significant ( $F = .3241$ ,  $p < .57$ ;  $F = .0461$ ,  $p < .83$ ).

On the basis of the post-experimental inquiry, subjects were eliminated from the analysis (VOL/EXP = 4; VOL/NAT = 7; NVOL/EXP = 9, NVOL/NAT = 6). They were able to verbalize the intended hypothesis of the study. The mean responses for the remaining 66 subjects were used as a measure of the unconscious effects of two variables. Table 2 shows the mean response for this group.

TABLE 2  
ABSOLUTE DEVIATION MEANS FOR SUBJECTS  
UNABLE TO VERBALIZE HYPOTHESIS

	SETTING		
	SCIENTIFIC	NON-SCIENTIFIC	
NON VOLUNTEER	17.43	20.06	18.87
VOLUNTEER	12.53	17.44	14.77
	14.98	18.75	

An analysis of variance on the mean responses is presented in Table 3. The willingness to participate is significant at the .06 level, while environmental setting is significant at the .07 level. Although the joint additive effect is significant at the .02 level, neither main effect is at the conventional .05 level of significance. An examination of the differences between the row means and column means and a sample size of 66 suggests that an error rate of .10 is acceptable.

TABLE 3  
ANALYSIS OF VARIANCE ON MEAN  
ABSOLUTE DEVIATIONS

SOURCE	SS	df	MS	F	P.
MAIN EFFECTS <sub>a</sub>	517.69	2	258.85	3.82	0.027
W*	229.15	1	229.15	3.39	0.071
S*	241.41	1	241.41	3.57	0.064
W x S	21.20	1	21.20	.31	0.578
ERROR (W. Cell)	4,197.04	62	67.69		
TOTAL	4,735.94	65			

a = join additive effects of W and S  
W\* = volunteer, non-volunteer  
S\* = scientific, non-scientific

#### Discussion

When all the subjects are included, the analysis suggests that the volunteer subjects across settings respond in the intended manner. The non-volunteers in a non-scientific setting respond contrary to our expectations. In all cases the mean absolute deviations are large, indicating very little willingness on their part to validate our hypothesis. If we assume that all the subjects did not recognize and interpret our hypothesis we are left with an ambiguous interpretation of the interactive unconscious effect of two artifacts. However, when the subjects who recognize and interpret our hypothesis are eliminated from the study, the artifactual variables appear to have an unconscious and systematic effect on their responses.

An analysis of the post-experimental inquiry for the eliminated subjects is revealing. Volunteers who recognize and interpret the hypothesis react contrary to the statement of consensus findings. Their responses are extreme, and appear to represent a reaction to being deceived. The non-volunteers placed in the scientific setting also have extreme responses.

However, their responses are more a reaction to their being coerced into participating in an experiment. Finally, the responses of the non-volunteers in the non-scientific setting are less variable than any other group of subjects. From their post-inquiries they appear to be more concerned with completing the questionnaire than with expressing their true feelings. Unlike the other non-volunteers, their responses seem to reflect an "I gave you what you were looking for" attitude.

When these aware subjects are eliminated, we are left with the conclusion that subjects who can not verbalize an experimental hypothesis are nonetheless influenced by two artifactual variables.

Volunteers, on the average, have less variability in their response. Likewise, subjects in the scientific setting, on the average, have less variability in their responses. If we assume that smaller absolute deviations are an unconscious attempt to validate an experimental hypothesis and larger absolute deviations an unconscious attempt to invalidate the hypothesis, the data suggests two observations. First, even though subjects are naive about an experimenter's hypothesis the conditions created in this study appear to systematically influence their performance. Second, the environmental setting of a psychological laboratory and the willingness to participate appear to contain within themselves enough information (cues) to cause an unconscious effect.

#### Conclusion

This study raises important issues with regard to the external validity of laboratory research.

Can we generalize our findings in the scientific setting to non-scientific settings? This study suggests we can't. Can we generalize the findings from volunteer subjects to non-volunteers? This study suggests we can't. What can we say?

In the absence of learning an experimenter's hypothesis, the environmental setting and willingness to participate contain within themselves enough information to unconsciously influence the performance of subjects. For researchers engaged in consumer behavior experiments, being aware of demand characteristics is the first step taken to reduce their influence.

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## DETERMINING THE SALIENCE OF RELEVANT REFERENTS

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### Abstract

How the elicitation question wording suggested by Fishbein for determining relevant referents affects the set of relevant referents and how these sets differ in predicting Fishbein's subjective norm were examined. Elicitation question wording affected the types of and frequency with which referents were elicited. No differences in the ability of these sets to predict the subjective norm were found.

### Introduction

The nature of the elicitation procedure suggested by Fishbein for determining salient referents has many implications for users of Fishbein's extended model. Methodologically, marketers need situational flexibility so that salient referents aren't excluded and non-salient ones aren't included. Strategically, knowing relevant referents indicates whose opinions can have an effect on behavior. Conceptually, the aggregation of these relevant referent's opinions determines the perception of the desires of the "generalized other," i.e., the subjective norm (SN). Thus, the purpose of this paper is to determine (1) the extent to which different elicitation questions result in different sets of relevant referents and, (2) the set that is the best predictor of SN.

### Method

A study was conducted in two phases. The initial phase of the research involved composing a questionnaire to determine "important others" for buying sunglasses, automobiles, T.V.'s, and raincoats.

The following questions were selected because they represented operationalizations that would logically follow from the conceptual framework behind the normative component (Fishbein, personal communication). (1) SKINF: From what sources would you seek information about (product name)? (2) AGR: What sources would you want to agree with your buying (product name)? (3) OP: Whose opinions about buying (product name) would you value? (4) FE: Who do you think would have feelings about whether you should or should not buy (product name)? Each respondent reacted to each question and each product only once. A content analysis was performed, and the most frequently mentioned referents for each of the products and for each of the questions were recorded. A total of 350 valid surveys were collected.

The results of the Phase 1 elicitation survey were used to construct the Phase 2 questionnaire. The purpose of Phase 2 was to determine whether the different wordings used in Phase 1 yielded sets of referents that varied in their ability to predict SN. Seven place bi-polar scales were used to determine normative beliefs, motivation to comply, and the subjective norm.

### Results

There were definite wording effects. For all four products, Kendall's W was not significant. This means that the frequency with which a referent was mentioned, and hence according to Fishbein its "importance" rank, varied according to the elicitation question asked.

The methodological implications are that the marketer has little flexibility in the way he can ask elicitation questions because the strategy used to increase the normative desirability of his product will vary as a function of the question asked. For example, an auto marketer's strategy would be affected by the elicitation question wording. Had he asked SKINF, the fact the car was well received by consumer guides would be stressed. Had any of the other questions been asked, the ad's main focus would be on the spouse.

The conceptual question of which elicitation question gives the best set of relevant referents can be answered by looking at the  $SN-\Sigma NB_i MC_i$  correlations. Using Fisher's Z transformation to test for significant differences among the correlations, it was found that for a given product category, none were significantly different. It appears that these different  $\Sigma NB_i MC_i$ 's are accounting for different parts of the variance in SN. The correlations, while significant at  $p < .01$  they ranged from .254 to .654.

While none of the elicitation questions yielded a set of referents that did a significantly superior job of predicting SN, an examination of the average correlation coefficients for the various wordings suggest that AGR's and OP's set of referents may be "best" at predicting SN. Unfortunately, the strategies based on the two wordings are quite different, irrespective of product category.

### Discussion

This study has not discovered the "best" way of eliciting relevant referents. It has, however, pointed out the strategic ramifications of the problem and, hopefully, will encourage further research on the issue.

THE EFFECTS OF TIME ON THE STABILITY  
OF THE DETERMINANTS OF INTENTION

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Abstract

An investigation of the stability over a three month period of the relative importance of the attitudinal and normative components of Fishbein's intention model showed a certain amount of instability. However, the changes in marketing strategy as a result of this instability were few.

Introduction

In the early 1970's, marketers began investigating the applicability of the theories of Martin Fishbein (Fishbein and Ajzen, 1975). During the first part of the decade, the research centered on his expectancy-value attitude model. This model views attitude (A) as the sum of the salient beliefs ( $b_i$ ) about the outcomes of performing a behavior weighted by the evaluation ( $e_i$ ) of those outcomes. Mathematically, the expectancy-value formulation can be represented as  $A = \sum b_i e_i$ .

Within a few years, marketers had turned to Fishbein's extended model. This model was designed to predict behavioral intention (BI) which was assumed to mediate actual behavior (B). Intention was viewed as being determined by the attitude toward performing the behavior ( $A_B$ ), i.e., the extent to which the customer felt that his performing the behavior was a good or a bad thing to do, and the subjective norm (SN), i.e., the consumer's feelings about the extent to which "important others" want or do not want him to perform the behavior. The relative importance of  $A_B$  and SN is determined through the use of multiple regression analysis. Mathematically, the model can be represented as:

$$B = BI = (A_B)_{w_0} + (SN)_{w_1} \quad (1)$$

The determinants of  $A_B$ , beliefs and their respective evaluations, were discussed earlier. The determinants of SN are (1) normative beliefs ( $NB_i$ ), i.e., feelings about the desires of specific referents . . . people whose opinions about the performance of the behavior are felt to be "important" and (2) the motivation to comply ( $Mc_i$ ), i.e., the extent to which the referent's wishes are complied with. Mathematically, SN can be represented as:

$$SN = \sum NB_i (Mc_i) \quad (2)$$

By 1975, there had been enough tests of the extended model to warrant a review article (Ryan and Bonfield, 1975). While the extended model has been used to predict many marketing and non-marketing behaviors, including smoking marijuana (Bearden and Woodside, 1979), a number of issues still remain. These issues include: (1) the ability of the model to predict individual brand choice (Bass, 1972); (2) the formulation of the normative component (Glassman and Fitzhenry, 1976); (3) the casual nature of the model (Dickson and Minard, 1979); and (4) the appropriateness of using multiple regression to determine the relative importance of attitudinal and normative influences.

The use of multiple regression has been questioned because of the inherent instability of regression coefficients. Even Fishbein feels that this is a

weakness of the model. However, he has defended its use by saying that despite its inadequacies, multiple regression is the best technique currently available (Fishbein, p.c.). This instability can be conceptually and strategically troublesome. Conceptually it can be troublesome because the regression weights represent the relative importance of attitudinal (psychological) and normative (social) influence. While the weights are expected to vary over time, populations and products, one would expect the weights, if they are psychologically meaningful, to remain stable for different subsamples of the same population, responding to the same questions about the same products within a relatively short period of time. Stability is important strategically because only an attitudinal message, i.e., a message designed to change salient beliefs and/or their respective evaluations, should have an effect on the intention to perform an attitudinally determined behavior. Likewise, only a normative message, i.e., one that deals with the social desirability of the product or its use, should have an effect on a normatively determined behavior. Changing the "wrong" component of the model should have no impact on buyer behavior.

The purpose of this paper is to examine the relative stability of these regression coefficients. If they are found to be stable, then those who attribute significant psychological meaningfulness to the weights for segmentation and other strategic purposes could feel somewhat more confident in doing so. Should the weights be unstable, it could cast some serious doubts about the usefulness of the model.

Method

Phase 1 - Questionnaires were distributed to 160 women shoppers as they entered a neighborhood Chicago area supermarket. The questionnaire (see Appendix A) was a semantic differential type scale suggested by Fishbein (Fishbein and Ajzen, 1975, p. 309) that ascertained the respondent's attitude toward buying, intention to buy, beliefs (and their respective evaluations) about buying, normative beliefs (and their respective motivation to comply) about buying each of the following products: Tide and Cheer detergent, Jay's and Lay's potato chips, Standard and Shell gasoline, and Hill's Bros. and Folger's coffee. Usable questionnaires were returned by 126 women.

Phase 2 - Because the paper deals with stability over time, the method of operationalizing time and measuring its effects is crucial. Unfortunately, the literature provides very little guidance. Repeated measures was considered. However, this approach wasn't used because of problems of internal and external validity (Campbell and Stanley, 1963). It was decided that a separate sample pretest-posttest design (Campbell and Stanley, 1963, p. 55) would be best. This design is externally valid and suffers from fewer threats to internal validity. By recording the names of Time 1 respondents, the independence of the Time 1 and Time 2 samples was assured. Because the grocery store's clientele was loyal, static, geographically limited and demographically well defined, it was felt that the cognitive structure

of the two samples, at least in terms of the relative importance of attitudes and norms in determining the intention to buy the products under investigation, should be the same.

The rationale behind a three month time interval began with the purpose of the study. If attitudes and norms are psychologically meaningful, they should be stable with respect to the products investigated unless the marketing strategy (attitudinal/normative focus) changes. Other, non-marketing events shouldn't change the relative importance of the weights if they are psychologically meaningful. Three months was felt to allow for other, non-marketing factors to work while at the same time minimize the likelihood that a company would change the attitudinal/normative focus of its marketing. An analysis of the advertising for the eight products during the three month period showed no change in the attitudinal/normative focus.

To keep survey instrument bias constant, the same instrument was administered. Seventy-five women received the survey as they entered the store. Usable questionnaires were returned by 58 women. An analysis of the demographic characteristics of the Phase 1 and Phase 2 samples showed no statistically significant differences.

### Results

Table 1 shows the attitudinal (column 1) and normative (column 3) regression coefficients and the multiple correlation coefficient (column 5) for each of the eight products based on the data collected at time 1 (T<sub>1</sub>) and T<sub>2</sub>. The effect of time on the regression coefficients was determined by using the following formula (Kerlinger and Pedhazuer, 1973):

$$F = \frac{(R^2_{y.123} - R^2_{y.14}) / (k_1 - k_2)}{(1 - R^2_{y.123}) / (N - k_1 - 1)} \quad (3)$$

where: (1) R<sup>2</sup><sub>y.123</sub> is the squared multiple correlation coefficient for the following independent variables: time (a dummy variable), A<sub>B</sub> or ΣNB<sub>1</sub>Mc<sub>1</sub> at T<sub>1</sub>, and A<sub>B</sub> or ΣNB<sub>1</sub>Mc<sub>1</sub> at T<sub>2</sub>; (2) R<sup>2</sup><sub>y.14</sub> is the squared multiple correlation coefficient for the following independent variables: time and A<sub>B</sub> or ΣNB<sub>1</sub>Mc<sub>1</sub> for all 184 respondents; (3) k<sub>1</sub> and k<sub>2</sub> represent the number of independent variables associated with the first and second R<sup>2</sup> respectively; and N is the total number of respondents (184).

The results of the F-tests are presented in columns 2 and 4 of Table 1. Time does seem to affect the stability of the weights. While not encouraging, these findings don't necessarily mean the extended model is useless. Notice that, irrespective of time, the attitudinal contribution to intention was always significant and always greater than the normative contribution. As such, using either the T<sub>1</sub> weights or the T<sub>2</sub> weights would lead to the same strategy . . . an attitudinally oriented one. Ideally, a similar analysis of the normative component would show weights making a significant or insignificant contribution to intention, for a given product, irrespective of time. Unfortunately, this consistency was observed in only one-half of the cases (Folger's coffee, Standard gasoline, Tide detergent, and Cheer detergent). For the other one-half, strategy errors could occur in that normative factors might be emphasized when they made no contribution to intention and/or they might not be emphasized when they made a significant contribution to it.

TABLE 1  
REGRESSION COEFFICIENTS AND R AT T<sub>1</sub> AND T<sub>2</sub>

Product	Time	Attitudinal Regression Coefficient	Effect of Time	Normative Regression Coefficient	Effect of Time	R
Folger's Coffee	T <sub>1</sub>	.527 <sup>xx</sup>		.255 <sup>x</sup>		.708 <sup>xx</sup>
Folger's Coffee	T <sub>2</sub>	.476 <sup>xx</sup>	x	.186 <sup>x</sup>	xx	.608 <sup>xx</sup>
Hill's Bros. Coffee	T <sub>1</sub>	.697 <sup>xx</sup>		.134		.770 <sup>xx</sup>
Hill's Bros. Coffee	T <sub>2</sub>	.569 <sup>xx</sup>	xx	.207 <sup>xx</sup>	xx	.707 <sup>xx</sup>
Shell Gasoline	T <sub>1</sub>	.483 <sup>xx</sup>		.205		.585 <sup>xx</sup>
Shell Gasoline	T <sub>2</sub>	.442 <sup>xx</sup>	x	.271 <sup>xx</sup>	x	.662 <sup>xx</sup>
Standard Gasoline	T <sub>1</sub>	.500 <sup>xx</sup>		.296 <sup>x</sup>		.726 <sup>xx</sup>
Standard Gasoline	T <sub>2</sub>	.500 <sup>xx</sup>	NS	.255 <sup>xx</sup>	x	.680 <sup>xx</sup>
Tide Detergent	T <sub>1</sub>	.740 <sup>xx</sup>		.039		.767 <sup>xx</sup>
Tide Detergent	T <sub>2</sub>	.665 <sup>xx</sup>	xx	.105	xx	.742 <sup>xx</sup>
Cheer Detergent	T <sub>1</sub>	.571 <sup>xx</sup>		.148		.676 <sup>xx</sup>
Cheer Detergent	T <sub>2</sub>	.461 <sup>xx</sup>	xx	.133	NS	.529 <sup>xx</sup>
Jay's Potato Chips	T <sub>1</sub>	.444 <sup>xx</sup>		.330 <sup>xx</sup>		.680 <sup>xx</sup>
Jay's Potato Chips	T <sub>2</sub>	.651 <sup>xx</sup>	xx	.120	xx	.724 <sup>xx</sup>
Lay's Potato Chips	T <sub>1</sub>	.492 <sup>xx</sup>		.153		.600 <sup>xx</sup>
Lay's Potato Chips	T <sub>2</sub>	.540 <sup>xx</sup>	x	.179 <sup>x</sup>	NS	.665 <sup>xx</sup>

NS = Not Significant  
x = p < .05  
xx = p < .01

N: T<sub>1</sub> = 126  
T<sub>2</sub> = 58

Conclusion

The strict statistical (F) test of the stability of the regression coefficients over time gave disappointing results. However, the analysis of the stability of the relative importance of attitudes and norms and of the statistical significance of the contribution to intention of the two components over time was encouraging because it showed that the statistically significant differences meant few changes in marketing strategy. Whether this will always be true . . . one can't say. Other situations, particularly those in which the contribution of attitudes and norms to intention is approximately equal, need to be investigated. Researchers who have additional data on this issue should be encouraged to present their findings so that the issue of stability and its effects on marketing strategy can be clarified.

Appendix A  
Questionnaire

Intention - (BI)

The next time I go shopping for (product category)  
I do +3 : : : : : -3 I do not  
plan to buy (brand name)

Attitude - (Ag)

My buying (brand name) is  
Good 7 : : : : : 1 Bad  
Foolish 1 : : : : : 7 Wise  
Harmful 1 : : : : : 7 Beneficial  
Pleasant 7 : : : : : 1 Unpleasant  
Reliable 7 : : : : : 1 Unreliable

The sum of the five responses was taken as the index of attitude.

<sup>1</sup>Normative Beliefs - (NB<sub>i</sub>)

(Referent I) thinks I  
should : : : : : I should not  
buy (brand name)

Motivation to Comply - (Mc<sub>i</sub>)

In general,  
I want to do : : : : : I don't want to do  
what (Referent I) thinks I should do

<sup>2</sup>Beliefs - (b<sub>i</sub>)

Buying (brand name) is buying a (product category)  
that (attribute)  
True : : : : : False

Evaluation - (e<sub>i</sub>)

Buying (product category) that (attribute) is  
Good : : : : : Bad

<sup>1</sup>The subjective norm, the global measure of normative influences, was not measured. This in no way should affect the results of the study.

<sup>2</sup>An elicitation pretest of 40 women was used to determine salient beliefs and relevant referents.

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## KEY DIMENSIONS OF THE NEIGHBORHOOD STORE IMAGE

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### Abstract

Data from different Norwegian communities were analysed in order to identify store image dimensions. Two approaches to the study of store images showed somewhat different results. Open-ended questions about the most important reason for store selection were chosen as the most adequate approach for the purpose of this paper. The results provided by this approach were compared with corresponding findings from American and Dutch communities. Key dimensions of the specific image of the neighborhood store were identified by focusing on the strategic market segment of neighborhood store customers. Of three potential key dimensions, location and shopping environment appeared most important.

### Introduction

In retailing, and especially in grocery distribution, the neighborhood store has a long tradition. A large number of stores of this type has been replaced by larger and more distant stores, as a consequence of general historical processes, such as the industrialization and urbanization, as well as the economic and geographic concentration tendencies within the distribution system. In recent years, the importance of the neighborhood store seems, however, to have been more widely recognized again. For instance, in the Scandinavian countries public policies have been developed to support and maintain this type of grocery stores (Ekhaugen, Grønmo and Kirby, 1980).

From the consumer's point of view the neighborhood stores may be important in several ways. First, for some consumers, particularly those who have small transportation and storage capacities, the availability of a store near the residence may be necessary for their need for a regularly supply of groceries. Second, the neighborhood stores may have various psycho-social functions that cannot be fulfilled by more distant stores in a more concentrated distribution system. Through regularly visits to a store in their neighborhood, the consumers may establish stable personal contacts and take part in interpersonal communication and social interaction, which may strengthen their integration in the local community (Stone, 1954).

In general, neighborhood stores may be expected to have some attributes that distinguish this type of stores from other stores, and which may be quite important for various consumer groups. The purpose of the present paper is to identify the most important of these specific attributes of neighborhood stores. Data from consumer surveys in three different Norwegian communities will be analysed in order to identify key dimensions of the neighborhood store image.

### Theoretical Background

Since the pioneering article by Martineau (1958), many attempts have been made to identify and specify different attributes of stores, which are important for consumers, and which may be considered as elements or components of the general image of the store. In his review of a number of theoretical and empirical store image studies, Lindquist (1974-75) found that the following

attributes were most frequently referred to as important elements of the store image: Merchandise selection or assortment, Merchandise quality, Merchandise pricing, Locational convenience, Merchandise styling, fashion, General service, and Salesclerk service.

It is evident, however, that the value of such general lists of store attributes for the analyses of store images is rather limited. The results of previous research have indicated great variation in store images between product categories (King, 1978) and market structures (Arnold, Ma and Tigert, 1978). On this background it seems reasonable to follow the advice of Lindquist (1974-75, p. 37):

"The research should strive to identify key image dimensions and the relative use of such dimensions by various market segments as a function of both retail store type and merchandise/ service type."

In line with this research strategy the present paper will focus on the key image dimensions of one specific store type, the neighborhood store, and examine the variations in the relative use of these dimensions among consumers in three Norwegian communities with different market structures. In this analysis, the customers of neighborhood stores will be especially emphasized.

The neighborhood store may be defined objectively, primarily in terms of location, as a store which is near to the consumer's residence. Thus, neighborhood store customers are consumers who do most of their grocery shopping in one of the nearest stores. The image of the neighborhood store, is, however, defined subjectively, according to the customers' perceptions and evaluations of different attributes of the store (location as well as other attributes).

In the relatively large literature on store image research we do not find much investigation on the specific attributes of neighborhood stores. A review of the existing literature on neighborhood stores, particularly from the Scandinavian countries, leads, however, to a set of potential dimensions of the specific image of the neighborhood stores (Lund and Haugstveit, 1975; Nilsson, 1975, 1977; Petersen, Strøm and Lund, 1978; Widman, 1975; Aas, 1971):

1. Location: The neighborhood store is located at a short distance from the consumer's residence
2. Shopping Environment: The neighborhood store is frequently characterized by friendly personnel, pleasant store atmosphere, and good possibilities for social contact and interaction
3. Size: The neighborhood store is often a relatively small store, with a limited merchandise assortment, characterized by low complexity.

A common characteristic of these three potential dimensions of the specific neighborhood store image seems to be their focus on organizational aspects of the store rather than merchandise factors (price, quality, etc.). The present paper aims at examining whether each of the three potential factors really is a significant dimen-

sion of the neighborhood store image, and which of the three factors is the most important dimension. A basic principle for this study is that the measure of attribute importance should be provided by the retailer's customers (Hansen and Deutscher, 1977-78). Thus, the following hypothesis will be tested:

H: Use of the nearest stores is positively related to three important store image dimensions: Location, shopping environment, and size.

#### The Data

The data to be analysed were collected in 1976-77 from random samples of the adult population (16-74 years) in three different Norwegian communities. 806 individual respondents from the three communities were interviewed. The questions related to a number of background variables and consumer behavior variables, including shopping activities in the respondents' households. The overall response rate amounted to 72 per cent. As compared with census data on criteria of age and sex for each of the three communities, the final samples do not seem to be biased.

In order to maximize the variations in market structure among the selected communities, the selection of communities was guided by three criteria: Degree of urbanization, degree of industrialization, and degree of store concentration. The first community is Halden, which is located in the south eastern part of Norway. The number of inhabitants is about 27.000. The community is characterized by a high degree of urbanization, industrialization and store concentration. It will be referred to as the urban, concentrated community. The second community includes the areas of Oppdal and Rennebu in the middle part of the country. These areas have some 9.000 inhabitants. The degree of urbanization and industrialization is low, but the distribution system is relatively concentrated. The community will be referred to as rural, concentrated. The third community consists of the areas of Seljord, Kviteseid and Tokke in the eastern part of Norway. This community has about the same number of inhabitants and the same degree of urbanization and industrialization as the second one. On the other hand, the distribution system is less concentrated. The community will be referred to as rural, scattered.

#### Two Methodological Approaches to the Study of Store Images

As pointed out by Jain and Etgar (1976-77), we may distinguish between two different research methodologies in store image studies. The first methodology consists in asking the respondents to indicate their relative evaluation of prespecified store attributes, such as given physical properties and psychological characteristics of store. In the second approach, unstructured instruments are used to obtain store descriptions. Respondents are asked open-ended questions concerning the things they like or dislike about particular stores.

In the present study, both methodologies were used. The results of the first methodology are presented in [Table 1](#).

The respondents were asked to evaluate each of the store attributes that are listed in [Table 1](#). They were requested to describe each attribute as a very important, important or unimportant aspect of grocery stores in general. As the table shows, the merchandise quality is considered as the most important attribute, while

friendly personnel is the second ranked attribute. Other store characteristics that are considered to be important, are low prices, effective personnel, and little queue. This pattern is quite stable. The analysis showed no significant difference between neighborhood store customers and other consumers, and only small differences were found between communities, between males and females and between age categories.\* Previous Norwegian studies, using the same methodology, also show similar tendencies (Lund and Haugstveit, 1975; Petersen, Strøm and Lund, 1978).

TABLE 1  
CONSUMERS' EVALUATION OF  
DIFFERENT ATTRIBUTES OF GROCERY STORES

STORE ATTRIBUTE	EVALUATION			NO ANSWER	SUM	N
	Very important	Important	Unimportant			
High quality of merchandise	80	18	0	3	100Z	806
Friendly personnel	66	29	1	4	100Z	806
Low prices	57	34	3	6	100Z	806
Effective personnel	53	33	6	8	100Z	806
Little queue	51	36	6	7	100Z	806
Easy to park	52	26	17	5	100Z	806
Varied assortment	47	40	9	4	100Z	806
Self-service	37	34	24	5	100Z	806
Location near residence	34	33	27	6	100Z	806
Long opening hours	24	22	47	7	100Z	806
Location near working place	21	19	42	18	100Z	806

The main impression from this first methodology is that various aspects of merchandise are more important than the hypothesized, potential dimensions of the specific neighborhood store image. To the extent that these potential dimensions are evaluated as important, the shopping environment, in terms of friendly personnel, seems to be the most important dimension. Location apparently is less important. It should be noted, however, that the third potential dimension, size of the store, was not included in the prespecified list of attributes.

The second approach consists of an open-ended question about the consumers' single most important reason for their selection of grocery stores. The answers were content analysed and grouped into the categories of reasons that are listed in [Table 2](#).

The average distribution for all communities is somewhat different from the pattern indicated by [Table 1](#). The major difference is that location seems to be more important according to [Table 2](#) than it is according to [Table 1](#). As a reason for store selection, location seems to be as important as merchandise attributes, and more important than shopping environment (store atmosphere and personnel attributes).

Moreover, the reason-for-selection-approach indicates greater variations between different consumer groups than the evaluation-of-attributes-approach does. As shown in [Table 2](#), there are significant differences between the urban community and the two rural communities.\*\* The main difference is that merchandise attri-

\*Chi-square-tests were used to examine the significance of the differences.

\*\*Chi-square-tests ( $p < .001$ ).



butes are more important than location as reason for selection of grocery stores. This pattern is consistent with results from previous attribute importance studies. Some findings from different cities in North America and the Netherlands are presented in a review article by Arnold, Ma and Tigert (1978). These studies are based on mainly the same methodological approach as **Table 2**, and they were all completed at the same time as this Norwegian survey, but the American and the Dutch samples seem to be drawn from more urbanized areas. The comparison of all these studies indicates that merchandise characteristics and location are among the most important attributes in all communities and in all countries. Merchandise characteristics are more important than location in all the urban communities, but not in the two rural Norwegian communities. However, the responses from the American and the Dutch communities are more concentrated on the two most important store attributes (location and merchandise) than the responses from the Norwegian communities. This cross-cultural comparison indicates, furthermore, that shopping environment is almost as important in the Netherlands as in Norway, but quite insignificant in the North-American cities. On the basis of these patterns, the following preliminary hypothesis might be suggested for further investigation: Merchandise characteristics may be described as an urban dimension, location as a rural dimension, and shopping environment as a European dimension. An explanation of such differences might be that the greatest variations are found in urban areas as far as assortment in concerned, in rural areas with respect to distances, and in Europe as to shopping environment.

TABLE 2  
CONSUMERS' MOST IMPORTANT REASON FOR THEIR SELECTION OF GROCERY STORE, IN DIFFERENT COMMUNITIES

MOST IMPORTANT REASON	TYPE OF COMMUNITY			AVERAGE FOR ALL COMMUNITIES
	Urban, concentrated	Rural, concentrated	Rural, scattered	
	%	%	%	%
Distance, location	12	21	26	20
Shopping environment	13	9	8	10
Personnel attributes	2	3	2	2
Size of the store	2	1	0	1
Merchandise attributes	31	19	14	21
Service	5	6	14	8
Connections, business relations	3	22	11	13
Habits, customs	23	9	15	15
Other reasons	9	10	10	10
SUM	100	100	100	100
N	242	318	246	806

Another difference between Norwegian community types is indicated by **Table 2**. Reasons related to habits and customs are more important and reasons related to connections and business relations are less important in the urban community than in the other two communities. The latter reasons are primarily mentioned by members of the consumer cooperative movement, who do most of their grocery shopping in one of this movement's own stores. These reasons seem to be especially important in the concentrated rural community, where the cooperative movement has a strong position. Habits and customs are emphasized as reasons for store selection by consumers which continue to shop in a specific store because they once started to shop there. Although these reasons do not reflect a conscious support to the neighborhood store, such "traditional" behavior may often imply a loyalty to this type of stores, because such stores usually are older and have longer traditions than other stores.

To summarize, we may say that the evaluation-of-attributes-approach reflects general attitudes to different aspects of any retail store whatever, while the reason-for-selection-approach focuses on the specific attributes that discriminate the selected store from other stores (Arnold, Ma and Tigert, 1978). Thus being more sensitive to variations in market structure, the latter approach seems to be more appropriate than the former for the purpose of comparing different communities. Another difference between the two approaches is that the open-ended question about the most important reason for store selection gives more information about the saliency of the various store image dimensions than the other approach (Jain and Etgar, 1976-77). For the following analysis of key image dimensions of a specific store type, this information about saliency is of great interest. The purpose is not to describe the general store image as completely as possible, but to identify the most important dimensions of the specific neighborhood store image. The reason-for-selection-approach will now be used in an attempt to identify these dimensions.

Key Dimensions for a Strategic Group of Consumers:  
The Neighborhood Store Customers

The research strategy is to get information about attribute importance from the retailer's own customers (Hansen and Deutscher, 1977-78). This implies that the strategic market segment for the analysis of key dimensions of the neighborhood store image is the group of stable neighborhood store customers. The question is whether this group reports on a store image that is different from the store images among other groups. Building on the methodological approach presented in **Table 2**, we will now focus on this strategic consumer group. The intention is to examine how important the potential dimensions of the specific neighborhood store image really are, rather than how important the consumers in general think they could be.

Neighborhood store customers can be defined as consumers who do most of their grocery shopping in one of the stores which are nearest to their homes. Consumers who usually shop in stores that are significantly more distant than the nearest one, will not be considered as neighborhood store customers. The neighborhood store customers can be described as stable if they do most of their grocery shopping in one store instead of using different stores.

This group of stable neighborhood store customers will be compared to other consumer groups as to the most important reason for their selection of grocery store. This comparison is presented separately for the rural communities (**Table 3**) and the urban community (**Table 4**). The two rural communities are considered together, since there were no significant differences between the two samples with respect to the patterns which will be emphasized here.\*

The tables show that more than four fifths of the consumers in the rural communities are neighborhood store customers (one or several of the nearest stores used), while only one half of the consumers in the urban community can be described as such customers. However, as indicated by the tables, most of the neighborhood store customers in both community types can be characterized as stable (one of the nearest stores used). In sum, this strategic group of stable neighborhood store customers includes 73 per cent of the consumers in the rural communities and 44 per cent of the consumers in the urban community.

\*The significance of the differences was examined by means of chi-square-tests.

TABLE 3  
RELATIVE IMPORTANCE OF IMAGE DIMENSIONS AMONG  
CONSUMERS WITH DIFFERENT STORE SELECTIONS  
RURAL COMMUNITIES

MOST IMPORTANT REASON FOR STORE-SELECTION	STORES SELECTED			AVERAGE FOR ALL CONSUMERS
	One of the nearest stores used	Several of the nearest stores used	More distant store(s) used	
	X	X	X	X
Distance, location	30	0	9	24
Shopping environment	13	0	13	12
Size of the store	1	0	0	0
Merchandise attributes	11	49	20	17
Service	12	4	9	11
Connections	16	0	27	16
Habits	14	0	16	12
Other reasons	3	47*	6	8
SUM	100%	100%	100%	100%
N	355	53	75	483

\* Most of these respondents reported on various "practical" reasons (other than locational factors) for selecting different stores.

The hypothesis to be tested refers to the key dimensions of the store image that is specific to the neighborhood store. This hypothesis may be tested by identifying the reasons for store selection that is emphasized significantly more among consumers using one of their nearest stores than among other consumers. For this purpose chi-square-tests can be used to examine the significance of the differences.

Table 3 shows that in the rural communities location is more important and merchandise attributes as well as connections are less important among stable neighborhood store customers than among other customers. These differences, which are significant ( $p < .001$ ), means that location is the key dimension of the neighborhood store image in the rural communities.

TABLE 4  
RELATIVE IMPORTANCE OF IMAGE DIMENSIONS AMONG  
CONSUMERS WITH DIFFERENT STORE SELECTIONS  
URBAN COMMUNITY

MOST IMPORTANT REASON FOR STORE-SELECTION	STORES SELECTED			AVERAGE FOR ALL CONSUMERS
	One of the nearest stores used	Several of the nearest stores used	More distant store(s) used	
	X	X	X	X
Distance, location	23	0	4	12
Shopping environment	21	0	10	14
Size of the store	2	0	2	2
Merchandise attributes	14	50	44	31
Service	5	5	6	5
Connections	4	0	2	3
Habits	31	0	23	25
Other reasons	0	45*	9	8
SUM	100%	100%	100%	100%
N	96	20	103	219

\* Most of these respondents reported on various "practical" reasons (other than locational factors) for selecting different stores.

Table 4 shows that in the urban community location as well as shopping environment are more important and mer-

chandise attributes are less important among stable neighborhood store customers than among customers of other stores. According to these significant ( $p < .001$ ) differences, location and shopping environment are the key dimensions of the neighborhood store image in the urban community.

In sum, the hypothesis is largely supported by the analysis: it is possible to identify a specific neighborhood store image, and this image refers to organizational and institutional aspects of the store rather than merchandise attributes. Location is a key dimension of this image in both urban and rural areas. However, shopping environment seems to be a key dimension only in urban areas, and size seems to be insignificant in all community types.

#### Summary and Conclusions

The purpose of the present paper has been to study the importance for the consumers of the neighborhood store. On the background of the literature on theoretical and methodological approaches to the study of store images as well as empirical findings from previous research, the following hypothesis was formulated:

Use of the nearest stores is positively related to three important store image dimensions: Location, shopping environment, and size.

In order to test the hypothesis, consumer survey data from three Norwegian communities with different market structures were analysed.

Of the two most frequent approaches to the study of store image dimensions, open-ended questions about the most important reason for store selection were chosen as the more appropriate approach for our purpose. Compared with questions about relative evaluation of pre-specified store attributes, the chosen methodology is more sensitive to variations in market structure and gives more information about the saliency of the various image dimensions.

A comparison of the results provided by this approach with corresponding findings from American and Dutch communities showed that merchandise characteristics and location are among the most important store attributes in all countries and in all types of communities. Building on the variations between different communities, it might be hypothesized that the merchandise characteristics can be described as an urban dimension, the location as a rural dimension, and the shopping environment as a European dimension.

The key dimensions of the specific neighborhood store image were identified by focusing on those consumers who are stable customers in this type of store. This strategic market segment includes 73 per cent of the consumers in the rural communities and 44 per cent of the consumers in the urban community.

The hypothesis was largely, but not completely, supported by the analysis. Location is a key dimension of the specific neighborhood store image in all community types, shopping environment seems to be a key dimension only in the urban community, and size seems to be a key dimension in none of the community types.

These findings have several implications. One implication is that both large and small grocery stores might be perceived as neighborhood stores. Usually, however, there is a close relationship between size of the store and degree of urbanization, which means that large neighborhood stores are likely to be localized only in



densely populated areas.

As shown in previous research, the shopping environment seems to be less important as a store attribute in American communities than it is in Europe. Thus we might expect that the relative importance of location as a predominant dimension of the specific neighborhood store image is even greater in USA than it is in European communities. Further research is needed to test this hypothesis.

In any case, location seems to be among the most important attributes of grocery stores in different countries as well as in different types of communities. This fact indicates that the neighborhood store may have important functions irrespective of the degree of mobility or transportation capacity among the consumers. Thus we might expect that the neighborhood store will be an important store type also in future grocery distribution. In this connection, it would, however, be of interest to identify and specify the demographic and socio-economic characteristics of the stable neighborhood store customers.

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INFORMATION SEEKING STRATEGIES FOR AN INNOVATIVE PRODUCT WITHIN THE HUSBAND-WIFE DYAD

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Abstract

This research investigated modes of information seeking within the husband-wife dyad for a high risk innovation. Subjects completed a twenty-one item behavioral differential designed to measure the tendency to seek seven different information sources. Subjects also completed measures of generalized self-confidence, specific self-confidence, and anxiety. Multiple discriminant analysis was used to reveal the differences between the husband's and the wife's information search patterns. The results show the wife's greater tendency to ask her husband's opinion, the husband's willingness to evaluate advertising, and the husband's greater confidence levels (both generalized and product specific) as the major discriminators between the husband's and wife's information search.

Introduction

An area of continued interest to consumer behavior researchers is family buying behavior or more specifically, the interaction between the husband and the wife in the purchasing process (Davis and Rigaux, 1974; Ferber and Lee, 1974; Albaum, Hawkins, and Dickson, 1979; Consenza and Davis, 1980). However, these efforts have primarily concentrated on relatively common product categories or products that were not high in perceived risk. The purpose of this study is to examine information seeking within the husband-wife dyad for a dynamically continuous innovation which is quite high in perceived risk.

Davis and Rigaux (1974) have clearly indicated the importance of role specialization in the family purchasing process. They utilized four categories: 1) Wife dominant, 2) Husband dominant, 3) Syncratic (joint decision making), and 4) Autonomic (an equal number of decisions made individually by each spouse). Davis and Rigaux (1974) also point out the shifts that occur within these role structures during the buying process proceeding from problem recognition to information search to purchase decision. Information search tends to generate more autonomic behavior than the other two stages, i.e., one partner accepts the task of seeking additional data. The present research is concerned exclusively with the information search stage of the purchasing process.

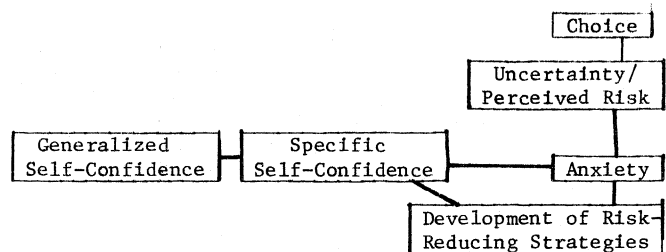
A microwave oven was chosen as the product stimulus considered for purchase, because it represented a dynamically continuous or possibly discontinuous innovation according to Robertson's (1971) schema at the time of the survey, 1975. Microwave ovens had been available to consumers for some time, but the product had not gained its projected market acceptance as of 1975 (Advertising Age, 1975). This was, in part, due to such factors as the radiation scare started in 1973. Microwave ovens represent a new way of cooking and have received adverse publicity regarding potential health hazards. These factors indicate extremely high performance risk associated with the product. Zikmund and Scott (1973) measured the perceived risk for microwave ovens and also for other typical consumer goods such as lawn furniture. The study showed microwave ovens had significantly higher risk ratings than all other products tested. Because of this, Zikmund and Scott

(1973) eliminated the microwave oven from their study after the initial comparative risk scaling.

Given the high risk and relative technical complexity of information regarding the performance of a microwave oven, this study attempted to examine the information sources utilized by the husband and the wife.

Taylor (1974) has developed a comprehensive theory of consumer risk taking. Figure 1 illustrates the choice-risk part of the theory that is utilized in this study. The consumer in any choice situation is confronted with uncertainty or perceived risk. This linkage is well documented in the literature (Roselius, 1971; Bauer, 1960). However, the amount of perceived risk varies by product class (Lutz and Reilly, 1973; Zikmund and Scott, 1973). The uncertainty experienced by consumers leads to the development of risk reduction strategies. In the context of consumer behavior, risk has been viewed as containing two components; 1) uncertainty and 2) importance or danger (Cunningham, 1967). For the most part, consumers tend to reduce the uncertainty component by seeking information about the purchase decision (Roselius, 1971).

FIGURE 1  
RELATIONSHIP BETWEEN CHOICE AND RISK  
REDUCTION STRATEGIES (TAYLOR, 1974)



Empirical research on the effect of the intervening variables (self-confidence and anxiety) is far from complete according to Taylor (1974). Most studies dealing with information seeking and product choice situations have been done with relatively common products such as, automobiles (Bell, 1967), appliances (Newman and Staelin, 1972), and food products (Lambert, 1972). Zikmund and Scott (1973) have reported the importance of self-esteem in reducing risk. Bell (1967) reports on the interaction between general and specific self-confidence for purchasing automobiles. Uncertainty led to seeking the support of a "purchase pal" forming a buying team with the overall result that customer self-confidence was enhanced by the pal.

Researchers have developed a useful typology of various information sources that consumers use to reduce risk (Andresen, 1968; Lutz and Reilly, 1973). Lutz and Reilly (1973) developed operational measures which were subsequently used by Hermann and Locander (1977) and Locander and Hermann (1979) to examine the relationships between the components of Taylor's (1974) model. Specific Self-Confidence (SSC) emerged as the dominant variable in determining the extent of information seeking an individual engaged in for a broad range of products, including a microwave oven. Neither Generalized Self-

Confidence (GSC) or Anxiety had the theorized impact in either study. Thus, it is hypothesized that SSC will be the major factor in the husband-wife information search.

## Methodology

### Subjects

The subjects consisted of 89 married couples contacted through a local civic club in a predominantly white suburb of Houston, Texas in the spring of 1975. The Hollingshead (1957) index indicated the respondents were primarily from the middle and upper middle social classes.

### Description of Measures

As previously described, the product stimulus was a high risk microwave oven. In the present study, the subjects were asked to project themselves into the following hypothetical purchase situation. The following paragraph was developed and used by Lutz and Reilly (1973):

You need to buy a microwave oven for your own personal use, but when you go shopping you discover that all the brands that you are familiar with are unavailable. The only brands available in the entire town are brands A, B, C, D, and E, brands which you know nothing about. Nevertheless, you need the product and, therefore, must make a choice among the five brands. However, for you to select a brand without any information about the brands would be virtually the same as selecting at random.

### Information Seeking Strategies

These measures were based on the well established notion (Roselius, 1971; Andreasen, 1968) that consumers do seek information from different sources when faced with risk or uncertainty. Andreasen (1968) outlined five types of information sources from which the consumer can seek information to satisfy a particular need:

1. Impersonal Advocate (IA) - mass media advertising including reading magazine ads, listening to a radio commercial, reading newspaper ads, viewing TV commercials, or looking at point-of-purchase displays.
2. Impersonal Independent (II) - checking with Consumer Reports, or a product test report.
3. Personal Advocate (PA) - asking sales clerk or store manager's opinion.
4. Personal Independent (PI) - trying to remember what brand a friend uses, asking opinions of family members, seeking the opinion of a neighbor or co-worker.
5. Direct Observation/Experience (OE) - ask for a product demonstration, rely on past personal experience, try the product before buying, or read the information on the package.

In their original work, Lutz and Reilly (1973) operationalized the above typology and added a sixth:

6. Pick a brand (BUY) - a behavior to go ahead and pick a brand.

The rationale for number six was that it allowed the subject to respond without being forced to select an outside information source.

7. Spouse Opinion (SPOUSE) - ask for the spouse's opinion.

All subjects were asked to respond to the microwave situation by rating their information search pattern on twenty-one behavioral differential items (Triandis, 1964) as developed in Lutz and Reilly (1973). These items measure the seven information seeking strategies. The twenty-one items were coded from 1 (I would) to 7 (I would not) seek the particular source in question.

### Generalized Self-Confidence (GSC)

Subjects were then asked to complete the short version of the Coopersmith Self-Esteem Inventory (1970). The scale contains 25 self-administered items in which the subject answers "like me" or "unlike me." An additive score of self-confidence was then calculated for each person. Generalized self-confidence was then calculated for each person. Generalized self-confidence refers to the extent to which an individual believed himself to be capable, significant, successful, and worthy (Coopersmith, 1967).

### Specific Self-Confidence (SSC)

This refers to the subject's confidence with respect to the decision at hand. Much of the work with specific self-esteem has been conducted in a persuasibility context (Cox and Bauer, 1964). Bell (1967) studied self-confidence and persuasion in automobile buying. From this work, a seven point specific self-confidence measure was developed. Respondents were asked to complete a rating scale with bipolar adjectives "I would," "would not," be confident of my ability to pick the best buy from the five available brands.

The brands (A through E) refer to the unfamiliar ones set up as part of the role playing situation mentioned previously.

### Anxiety (A)

Near the end of the instrument subjects completed the Bendig (1956) Short Form Manifest Scale. This is a shortened form of the Taylor Manifest Scale (1953) which is an extensively used and validated measure of trait anxiety. It is a 20 item scale in which subjects respond "true for me" or "false for me." An additive score of deviant responses was then constructed for each subject. These ten variables constituted the operational measures in the study.

### Procedure

The sample of 89 husband-wife pairs were contacted through a suburban civic club. The civic club was compensated for completed interviews which were administered using a drop off and pick up method. A professional researcher supervised and acted as liaison for the field work.

### Design

The data were analyzed using the SPSS (Nie, et.al, 1975) multiple discriminant analysis program which searched for differences between the husbands and wives with respect to their information seeking strategies. Incomplete questionnaires led to a total of 71 wives and 78 husbands being used in the final analysis.

### Results

The discriminant function differentiating between husbands and wives is significant at the  $p = .0009$  level.

TABLE 1  
STANDARDIZED DISCRIMINANT FUNCTION  
COEFFICIENTS

Information Source	Discriminant Coefficient
Observation/Experience (OE)	0.344
Personal Independent (PI)	-0.309
Impersonal Advocate (IA)	-0.434
Personal Advocate (PA)	0.303
Impersonal Independent (II)	-0.243
Pick a Brand (BUY)	-0.109
Ask Spouse's Opinion (SPOUSE)	0.683
Specific Self-Confidence (SSC)	-0.364
Generalized Self-Confidence (GSC)	0.404
Anxiety (ANX)	-0.183

TABLE 2  
OVERALL MEANS FOR HUSBAND-WIFE UTILIZATION  
OF INFORMATION SOURCES

Information Source	Mean for Husbands	Mean for Wives	Significance (T-test)
Observation/Experience (OE)	2.386	2.188	.236
Personal Independent (PI)	2.795	2.892	.688
Impersonal Advocate (IA)	3.069	3.335	.274
Personal Advocate (PA)	3.905	3.640	.320
Impersonal Independent (II)	2.193	2.568	.100
Pick a Brand (BUY)	3.386	3.966	.075
Ask Spouse's Opinion (SPOUSE)	1.832	1.236	.002
Specific Self-Confidence (SSC)	2.079	2.523	.056
Generalized Self-Confidence (GSC)	20.528	18.861	.007
Anxiety (ANX)	4.077	5.141	.071

Note: Information seeking; 1 = would, 7 = would not use  
SSC; 1 = high SSC, 7 = low SSC  
GSC; 25 = high GSC, 1 = low GSC  
ANX; 0 = low ANX, 20 = high ANX

The standardized coefficients are given in Table 1. Interpretation of the function is greatly enhanced by an examination of the mean values for each of the variables (see Table 2). For each of the information seeking strategies, the lower the scale value, the more the particular source was used. Thus, the positively weighted coefficients were those preferred by the wives and the negatively weighted coefficients were those information sources preferred by the husbands. From this it is clear the key difference is the wife's greater tendency to ask her spouse's opinion before making the purchase. The wife also tends to rely on her own experience and observation and to ask a salesperson more than her husband. The husband will utilize advertising and both independent sources more than the wife. However, a full interpretation of the discriminant function requires a closer examination of the personality constructs.

The lower the scale value for SSC the greater the level of SSC, thus the negative sign in the discriminant function indicates a higher level of SSC for the husbands. Similarly, the lower the level of anxiety, the lower the ANX score, and again the husbands had lower levels of anxiety. For GSC the scaling was reversed and a higher score indicated greater level of GSC. The husbands had a higher GSC score, thus the positive discriminant coefficient.

The overall interpretation is that for this highly risky product the additional confidence of the husband, both generalized and product specific, was being heavily relied upon by the wife, which was reflected in the discriminant function.

## Discussion

The findings strongly indicate a husband dominant information search for this risky product. This seems reasonable given the technical nature of the product, however, since a microwave oven is a kitchen appliance, one might not expect this strong a finding.

It should be noted the discriminant function serves to differentiate between the husband's and the wife's information seeking behavior, but it does not indicate differences in relative utilization of the sources. The T-test results give the significance of the different rate of seeking the information sources. While the discriminant analysis was highly significant the means for husbands and wives showed relatively small actual differences which indicates a potential problem with statistical versus operational significance (Green, 1978). A more significant limitation relates to ownership of a microwave oven. It is not known which respondents did or did not own a microwave oven at the time of the survey and product familiarity can affect both consumer evaluations (Pickering and Greatorex, 1980) and information search (Raju and Reilly, 1980). A replication with current innovative products, especially some products with a less pronounced sexual orientation, is needed.

The strength of the GSC variable was not expected since the prior study by Hermann and Locander (1977) demonstrated SSC as the dominant variable in information seeking for a microwave oven. However, that study was concerned with significant differences between the rates of utilization of information sources in reducing perceived risk and not with the objective of discrim-

inating between specific populations. The reliance of the wife on the husband, the use of advertising (IA), and the husband's level of confidence (both GSC and SSC) were the primary differentiating variables between the husband's and the wife's information search behavior.

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DECISION-MAKING INFLUENCE OF HUSBANDS AND WIVES WITHIN OLDER FAMILY  
DYADS: A STUDY OF THE DECISION TO PURCHASE VACATION TRAVEL

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Abstract

This paper reports the findings of an investigation of the decision-making influence exerted within family dyads by husbands and wives over sixty-five years of age. Each phase of decision-making -- problem recognition, search for information, and final decision-making -- was studied with regard to the decision to purchase vacation travel. The data reveal purchasing role structures and variations in these structures of family dyads as a function of educational levels and employment statuses of dyad members.

Introduction

Contemporary marketing literature is giving increasing attention to the population over sixty-five years of age. This concern is well supported, for example, by the dramatic growth in numbers of older Americans (from three million persons at the turn of the present century, to nearly 25 million now), by the increased share of the population represented by older Americans (from four percent in 1900, to approximately eleven percent now), and by their holding of consequential purchasing power (per capita income in households with heads aged 65 and over is higher than that in households with heads aged under 25, 25 through 34, or 35 through 44) (The Conference Board, 1974).

The "over-65" population has been investigated primarily in terms of its demographic characteristics. Little is known, however, about the nature of intra-family decision-making among members of this group. Even though evidence is available indicating what they purchase, research of the decision-making process within this group is limited (Tongren, 1977). Consequently, as noted by Phillips and Sternthal (1977): "Seldom are elderly consumers distinguished from other adults, unless a product or service is being targeted exclusively at older individuals. This relative neglect of the aged segment not only characterizes marketing strategists' behavior, but also typifies the orientation of persons responsible for regulating marketing activity and those researching consumer behavior."

Indeed, while there are numerous investigations of family-dyad decision-making, few empirical studies deal substantially with the decision process within the older household. More typically, multiple age categories are considered in composite studies of influence, with generalizations made to various age categories, where possible. For example, some studies have found that joint decision-making influences decrease as age increases (Wolgast, 1958), while others suggest that joint decision-making increases with age (Green and Cunningham, 1975). Empirical research which focuses primarily on decision-making influences among the "over-65" population, such as the work by Tongren (1976), Klippel and Sweeney (1974), and Schiffman (1971), is more the exception than the rule.

Existing empirical studies of family decision-making influences can be faulted on other bases, as well. Many are restricted to discussion of the final state of decision-making only. Frequently, responses are

obtained from the wife only, rather than from both spouses. Also, family characteristics which develop from pervasive social changes, and which introduce variations in decision-making roles of family dyads, require more direct attention. Finally, the degree of role consensus existing within family dyads may be exaggerated by the existing literature.

Objectives of the Study

The purpose of this study is to investigate the influences of husbands and wives over sixty-five years of age in each of three phases of decision-making to purchase, or not purchase, vacation travel. The data collected for the study are intended to determine whether the husband, the wife, or both husband and wife jointly have dominant influences in each phase of the decision process. The three phases of decision-making, as delineated in the study, are problem recognition, search for information, and final decision making. Vacation travel was selected because it represents a significant portion of expenditures for recreation by the elderly population (U. S. Department of Labor) and is an acceptable use of leisure by older persons (Friedsam and Martin 1973).

The research is structured on the premise that roles played by the husband and wife when considering the purchase of vacation travel are played as a function of three independent variables: education, employment status, and economic well-being. First, an attempt is made to determine degrees of influences within family dyads (husband-wife couples) for each of the three phases of decision-making as a function of the independent variables. This will reveal the purchasing role structures of these family dyads when considering the purchase of vacation travel. Then, variations in purchasing role structures across the three phases of decision-making, as a function of the independent variables, will be ascertained. More precisely, the study is a descriptive study, using primary data and designed to measure purchasing role structures of a group of selected respondents. The study augments efforts of business and governmental decision makers by providing an indepth descriptive analysis of a unique, selected group and providing information from which marketing strategies and public policies for this group may be developed.

Methodology

The population for this study consisted of 87 family dyads (174 persons) residing in the tri-county area of Duval, Clay, and Nassau counties in Florida. These 87 dyads represented 90.6 percent of all qualified dyads which held membership in local chapters of the American Association of Retired Persons. Eleven of the thirteen area chapters participated in the data collection effort. One chapter was in the process of disbanding, and another did not participate on the grounds that it had no husbands in the chapter.

Data were collected only from those husband-wife dyads which met all of the following selection criteria:  
(1) both husband and wife must be 65 years of age, or



over; (2) they must live together in the absence of others; (3) they must have at least considered vacation travel within the past twelve months; and (4) they must consider themselves physically able to travel. For purposes of this study, vacation travel was defined as "pleasure travel" away from the town in which the home of the respondent is located, with at least one night spent away from home.

The three independent variables identified previously (education, employment status, and economic well-being) served as the basis for generating hypotheses for the study. Three categories of education (educational level of the husband is greater than, equal to, or less than the educational level of the wife) and four categories of employment status (husband retired/wife never worked; husband retired/wife stopped working before retirement; husband and wife both retired; and "all others") were established for purposes of analysis. Due to the large number of "cells" created by this arrangement, and given the anticipated skewness of the occupational status data of this aged population, it was recognized that some cells probably would remain unoccupied. Consequently, it would not be possible to test some of the proposed hypotheses. For economy of space, hypotheses are spelled out in the "Findings" section, and are not repeated here.

Data were collected through the use of duplicate, self-administered questionnaires given to both members of each family dyad. Respondents were asked to report comparative husband-wife influences related to specific actions and decisions, using a scale with five Likert-type alternatives (named below) plus "I don't recall." The pretest of the questionnaire indicated that the average completion time was 20 minutes for men and 22.9 minutes for women. Of the 87 responding dyads, 86 produced usable questionnaires.

Self- and spouse-reported influences were aggregated for each dyad at each level of education and for each employment status, using the following weights:

- 1 - Husband Decides
- 2 - Husband Dominant/Wife Involved
- 3 - Both Decide Equally
- 4 - Wife Dominant/Husband Involved
- 5 - Wife Decides

Aggregate responses then were averaged for each dyad. Hypotheses pertaining to educational level and employment status were supported if average responses of sixty percent or more of the family dyads in each of the levels of education and employment loaded in favor of the spouse perceived as dominant in the hypothesis being investigated. If the husband and wife were perceived as making the decision jointly, then sixty percent or more of the family dyads had to load in the "Both Decide Equally" category in order to support the hypothesis pertaining to joint decisions. The sixty percent subjective decision criterion was employed to distinguish husband or wife dominance in categories when dyads loaded equally among the role structure categories being investigated.

### Findings

Hypotheses pertaining to educational levels and employment statuses were tested according to the criteria explained previously. The findings are summarized below. More detailed data are presented in [Tables 1 and 2](#).

### Decision-Making and Education

1a-c: The greater the number of years of education completed by the husband in the family, the greater the perceived role of the husband as:

- Recognizer of the problem - not supported.
- Searcher for information - not supported.
- Decision maker - not supported.

2a-c: The greater the number of years of education completed by the wife in the family, the greater the perceived role of the wife as:

- Recognizer of the problem - supported.
- Searcher for information - supported.
- Decision maker - not supported.

3: If both husband and wife share a common educational status (i.e., both have college degrees, some college, high school degrees, some high school), problem recognition, search for information, and decision making will come jointly from both husband and wife:

- For problem recognition - not supported.
- For search for information - not supported.
- For final decision making - supported.

As hypothesized (2a-c) wives with educational levels greater than their respective husbands assumed greater decision-making roles than husbands in problem recognition and search. Final decision making for this group, however, was characterized by a tendency toward joint decision making. The diminution of the wife's decision-making authority in the final stage was unexpected and caused rejection of the hypothesis which stated that she would be perceived as final decision maker.

Hypotheses (1a-c) pertaining to the husband's role involvement, where his educational attainment exceeded that of his wife, were not supported. As such, the husband was not reported as being more dominant than his wife in any of the three phases of decision making.

Where dyad members shared a common educational status (3), problem recognition, search for information, and final decision making were hypothesized to be joint responsibilities. This proved true only in the final decision-making phase. The problem recognition and search phases were characterized by within-dyad dominance, with the wife more dominant than her husband in recognizing the idea of taking a vacation, and the husband more dominant than his wife in the search phases. The results indicate that role dominance, favoring the wife, existed across the three phases of decision making, by educational level.

### Decision-Making and Employment Status

#### H ret./W never

4a-c: If the husband is retired, and the wife was never employed, the greater the perceived role of the husband as:

- Recognizer of the problem - not supported.
- Searcher for information - not supported.
- Decision maker - not supported.

#### W stop/H ret.

5a-c: If the husband is retired, and the wife stopped working before retirement age, the greater the perceived role of the husband as:

- Recognizer of the problem - not supported.
- Searcher for information - not supported.
- Decision maker - not supported.

TABLE 1

SUMMARY OF FAMILY ROLE STRUCTURE IN PROBLEM RECOGNITION,  
SEARCH FOR INFORMATION, AND FINAL DECISION MAKING  
BASED UPON EDUCATIONAL LEVELS OF HUSBANDS AND WIVES  
WITHIN DYADS (EXPRESSED IN PERCENTAGES)

Role Structure	Educational Level												TOTAL			
	H > W				H = W				H < W				I	II	II <sup>+</sup>	III
	I	II	II <sup>+</sup>	III	I	II	II <sup>+</sup>	III	I	II	II <sup>+</sup>	III				
Husband Decides	26.1	26.2	19.1	19.1	21.0	26.3	26.4	21.0	16.0	16.0	12.0	16.0	22.1	23.3	18.6	18.7
Both Decide	35.8	21.4	14.3	64.3	52.6	31.5	15.8	57.8	52.0	40.0	16.0	64.0	44.2	29.0	15.1	62.7
Wife Decides	38.1	40.5	11.9	16.6	26.4	21.1	15.8	15.9	32.0	36.0	20.0	20.0	33.7	34.9	15.1	17.4
Information Not Gathered	0.0	9.5	0.0	0.0	0.0	21.1	0.0	0.0	0.0	8.0	0.0	0.0	0.0	11.6	0.0	0.0
Information Not Ascertained	0.0	2.4	0.0	0.0	0.0	0.0	5.3	5.3	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
No Alternatives Considered	N/A*	N/A	54.7	N/A	N/A	N/A	36.7	N/A	N/A	N/A	52.0	N/A	N/A	N/A	50.0	N/A
Number of Dyads	42				19				25				86			

\*N/A = Not Applicable.

Key: H > W = Educational level of the husband is greater than educational level of the wife;  
H = W = Educational level of the husband is equal to the educational level of the wife;  
H < W = Educational level of the husband is less than the educational level of the wife.

I = Problem Recognition (Phase I)  
II = Search About Destination(s) First Considered (Phase II)  
II<sup>+</sup> = Search About Alternative Destination(s) Considered (Phase II)  
III = Final Decision Making (Phase III)

H & W ret.

6: If both husband and wife share or have shared a common employment status, both will be perceived as jointly:

Recognizing the problem - not supported.  
Searching for information - not supported.  
Making the decision - supported.

"All Others"

7a-c: If the husband is presently employed, and the wife stopped working before retirement age, the greater the perceived role of the husband as:

Recognizer of the problem - not supported.  
Searcher for information - supported.  
Decision maker - not supported.

8a-c: If the wife is retired, and the husband stopped working before retirement age, the greater the perceived role of the wife as:

Recognizer of the problem - supported.  
Searcher for information - supported.  
Decision maker - supported.

9: If the wife is presently employed, and the husband is retired, both will be perceived as jointly:

Recognizing the problem - not supported.  
Searching for information - supported.  
Making the decision - not supported.

In accord with the hypotheses (8a-c), wives in the employment-status category in which the wife was retired and the husband stopped working before retirement age assumed greater roles than husbands in problem recognition, search, and final decision making. One possible explanation for this occurrence may be suggested by the literature, which indicates that the fuller integration of women into the economic fabric of society has generated increasing relative decision influences of wives. The literature further evidences that if the wife contributes, or contributed as with the case of retired wives, to family income, she may acquire greater perceived decision-making power in the family. The data in this study indicate that the wife may have increased her intra-dyad decision-making power by virtue of employment. However, definitive acceptance of this finding is tenuous. Other factors, such as age, education, and social status, may also have increased her intra-dyad decision-making power.

Hypotheses (7a-c) pertaining to husband dominance in decision-making, by virtue of his employment, were not supported. Where the husband presently was employed and the wife stopped working before retirement age, the husband assumed less dominance than his wife in the problem recognition and final decision-making phases of the process. Hypotheses pertaining to these two phases of decision-making, in this employment-status category, therefore, were not supported. The husband assumed more dominance than his wife in the search stage, however. One plausible explanation as to why role specialization for search tended to accrue to the

All combinations of employment status were investigated. Since no dyads met other employment combinations, these hypotheses were not tested and, therefore, are not included in this study.



TABLE 2

SUMMARY OF FAMILY ROLE STRUCTURE IN PROBLEM RECOGNITION,  
SEARCH FOR INFORMATION, AND FINAL DECISION MAKING  
BASED UPON EMPLOYMENT STATUSES OF HUSBANDS AND WIVES  
WITHIN DYADS (EXPRESSED IN PERCENTAGES)

Role Structure	Employment Status																			
	H ret. W never				W stop H ret.				H & W ret				Empl. All Others				Total			
	I	II	II <sup>+</sup>	III	I	II	II <sup>+</sup>	III	I	II	II <sup>+</sup>	III	I	II	II <sup>+</sup>	III	I	II	II <sup>+</sup>	III
Husband Decides	0.0	20.0	40.0	20.0	19.1	38.2	28.6	9.5	25.5	18.1	14.5	21.8	20.0	20.0	0.0	20.0	22.1	23.3	18.6	18.7
Both Decide	60.0	60.0	0.0	80.0	52.3	9.5	28.5	76.2	41.8	30.9	10.9	60.0	20.0	60.0	20.0	20.0	44.2	29.0	15.1	62.7
Wife Decides	40.0	0.0	0.0	0.0	28.6	33.2	4.8	14.3	32.7	40.1	14.5	16.4	60.0	20.0	80.0	60.0	33.7	34.9	15.1	17.4
Information Not Gathered	0.0	20.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	10.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	11.6	0.0	0.0
Information Not Ascertained	0.0	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.0	0.0	1.8	1.8	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
No Alternative Considered	N/A*	N/A	60.0	N/A	N/A	N/A	38.1	N/A	N/A	N/A	58.3	N/A	N/A	N/A	0.0	N/A	N/A	N/A	50.0	N/A
Number of Dyads	5				21				55				5				86			

\*N/A = Not Applicable

Key: H ret./W never = Husband is retired and wife was never employed;  
 W stop/H ret = Wife stopped working before retirement age and husband is retired;  
 H & W ret. = Both husband and wife are retired  
 Empl. All Others = Husband is presently employed and wife stopped working before retirement age (2 dyads);  
 Both husband and wife stopped working before retirement age (1 dyad);  
 Husband stopped working before retirement age and wife is retired (1 dyad);  
 Husband is retired and wife is presently employed (1 dyad).

I = Problem Recognition (Phase I)  
 II<sub>1</sub> = Search About Destination(s) First Considered (Phase II)  
 II<sup>+</sup> = Search About Alternative Destination(s) Considered (Phase I)  
 III = Final Decision Making (Phase III)

husband in these dyads may be his perceived competence by virtue of his "position" in the work force. Although the data in this study provide inconclusive results about this possible explanation, the task of information seeking may call for an appropriate division of effort based on the perceived competence of the employed husband.

Where the husband was retired and the wife never was employed, the hypotheses (4a-c) stating that the husband would assume greater dominance than his wife in problem recognition, search, and final decision making were not supported. The data indicate that the decision-making process was conducted jointly by dyad members in this employment-status category.

Where the husband was retired and the wife stopped working before retirement age (5a-c), the husband assumed less dominance than his wife in the three phases of decision making. Thus, hypotheses pertaining to husband involvement, as a function of his retirement, were not supported. Where hypotheses were not supported, further analysis was conducted to determine the probable cause for non-support. As expected, where decision-making was not a joint effort by members of a dyad, responsibility for decision-making tended to accrue to the wife. In the search stage, however, responsibility, although not a joint effort, was divided among dyad members, i.e., an approximately equal percentage of husbands, and wives, searched.

It was hypothesized that joint decision-making would emerge in employment-status categories in which the wife presently was employed and the husband was retired (9), and in categories in which both husband and wife shared a common employment status (6). In the former case, the hypothesis pertaining to the search phase was supported, while in the latter case the hypothesis pertaining to the final decision-making phase was supported. In the four instances [joint problem recognition and final decision making in the category in which the wife was employed and the husband was retired (9), and joint problem recognition and search in the category in which both spouses shared a common employment status (6)] in which hypotheses were not supported, the wife was reported as more dominant than her husband.

The data indicate that where the wife entered the work force at some time during her lifetime, she assumed more dominance than her husband in the decision-making process (problem recognition, search, and final decision-making) regarding vacation travel. The same finding was not reported for her husband, however. The tendency toward traditionality of male dominance in employment positions for this particular age group may explain these results.

## Decision-Making by Economic Well Being

(10): Among family dyads which considered vacation travel, there is no difference in the economic well being of the family dyad which purchased vacation travel and the family dyad which did not purchase vacation travel - not supported.

The data did not support the null hypothesis (10) which stated that the economic wellbeing, as measured by net worth, of family dyads which purchased vacation travel would be the same as the economic wellbeing of family dyads which did not purchase vacation travel. Therefore, it was concluded that the economic wellbeing of those who purchased vacation travel was different from the economic wellbeing of those who did not purchase vacation travel. Analysis of net worth for all dyads indicated that those dyads which purchased vacation travel had an average net worth between \$25,000 and \$49,999 while those dyads which did not purchase vacation travel had an average net worth between \$15,000 and \$24,999.

## Summary and Conclusions

Nine of the 28 hypotheses tested in this study were supported, while 19 were not. Generally, the data suggest that wives within the older family dyads were perceived as more dominant than husbands in recognizing the idea of taking a vacation, and in searching for information relevant to the vacation. Role dependency, however, manifested itself in the form of joint decision-making in the final decision-making phase in which dyads commit themselves to purchase or not purchase vacation travel. Role dependency may have occurred as a function of lack of interest and/or lack of confidence by either spouse in making the final decision, lack of time, or sheer lack of desire by either spouse to accept blame for a poor decision, should the decision be found to be poor.

This study tends to support the idea that the older family dyad selected for this study is not a homogeneous unit. Rather, the interrelation between members of a dyad and the roles that each member plays in decision making seem to be distinctive factors to be considered in seeking better explanations of consumer behavior. Classification of a decision into various types of spouse-dominant influence suggests that communication strategies, media selection, and promotion policies may be "targeted" to the spouse responsible for the decision. For example, the group provides a highly targeted market for such media as direct mail or telephone selling, each of which communicates an individualized, personal appeal to a selected market. These media possess the qualities of adaptability and timelines. The media could be used by travel agencies who could time messages to coincide with spousal influences.

In summary, the study was not intended to be an explanation of the predispositions of all older adults. The study described a selected group of people from which generalizations, on a logical basis, may be made.

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## CONCEPTUALIZING ELDERLY BUYER BEHAVIOR

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The interest in the market is growing daily...we've had blinders on to anyone who wasn't young, raising a big family and in the "age of acquisition." (Business Week, November 19, 1979).

That statement personifies a renewed strategic interest in one of the fastest growing segments of the market -- the elderly. As the teen and early-20's segments shrink in size because of population attrition, many marketers have begun to re-examine their target segment strategies. This paper examines that growth segment with the objective of bringing together a conceptual framework for further research.

### Introduction - Demography

The elderly market, defined for purposes of this paper as individuals sixty years of age or older, has become a significant segment in terms of both size and purchasing power. It has doubled in size since 1950 and today represents 11 percent of the total U.S. population, and continues to grow at a rate approximately twice that of the under sixty segment. By the year 2003, the elderly segment is expected to grow to 38 million persons, or 14 percent of the total U.S. population. The estimates for the year 2030 - 55 million persons and 18 percent - are even more impressive (Business Week, September 3, 1979).

The growth trend in the elderly segment has a number of contributing factors. Life expectancy in the United States is currently 73.2 years for the total population with a projection of the improvement in life expectancy trend to continue to the end of the 20th century and an average expectancy figure of 80 years (Rice, 1979).

If the current declines in mortality tables are assumed to continue, then the over-65 generation will increase in size 59 percent, while the population as a whole is expected to increase by only 28 percent (Rice, 1979).

The greater life expectancy of females over males (77.1 versus 69.3 years) means that elderly women represent a greater percentage of the total (57.8% in 1980) and will continue to increase their proportional share to an estimated 59 percent by the year 2000 (Fowles, 1974).

The purchasing power of individuals sixty and over is substantial. The median income in 1979 for the 24.4 million elderly, according to the Kenyon and Eckhardt advertising agency, was \$8,063 (Business Week, November 19, 1979). In terms of aggregate income, the figure is well over \$100 billion. Indeed, the aggregate income of the elderly segment is over twice that of the under 25 market, which has been the focus of considerable marketing attention over the last two decades. Income, of course, represents only part of the elderly's purchasing power. As Atchley (1972) has noted, "[the elderly's] per-capita assets are the highest of any age group."

Finally in this demographic review is the fact that the elderly are not as widely dispersed as other segments in the market and are concentrated in two geographic

areas. Analysis of 1978 Census Bureau data shows this concentration in a band running north and south from Texas to Minnesota, approximately two states wide, and in the state of Florida.

### Elderly Buyer Behavior

Contributing to the demographic profile available to marketers is a limited selection of behavioral studies of elderly buying. Among these is the author's work (Towle and Martin, 1976) which shows the elderly consumer is not generally brand loyal (less than 9 percent), and that nearly two-thirds (60 percent) are psychographically described as candid, self-assured, stubborn and dominating. Certainly this is distinct from the oft inferred "grandmotherly image" portrayal found in much advertising.

Other than this earlier work, the principle research on this segment's buying behavior seems to have concentrated on information processing and the impact of in-store attributes on purchase decision-making.

### Impersonal Information in the Decision Process

Overall Media Usage. Using an AID-Covariate analysis (Rao, et. al., 1976) on data generated in a major time use study by the Institute for Social Research at the University of Michigan, we found that age was a predictor of use and enjoyment of newspapers (Hendrix and Martin, 1980). The study utilized the AID-Covariate algorithm to examine usage and enjoyment of three broad media classes: television, magazines and newspapers. However, only for newspapers was age a predictor of the covariates of enjoyment and media usage. These findings support the earlier conclusion of Bernhardt and Kinnear (1976) that newspaper readership is greater among the elderly than among the younger segments in the population. This author's own research concludes that the "older the respondent, the greater time devoted to reading a newspaper and correspondingly the greater enjoyment associated with that reading" (Hendrix and Martin, 1980).

Added to this is an earlier finding that elderly women buyers are more reliant on newspaper advertising in their fashion decision than are younger women (Martin, 1971).

Additional data on media usage indicates the elderly are less likely to read home-oriented, general readership magazines than the younger segments (Bernhardt and Kinnear, 1976) and that television is ranked first in usage (French and Crask, 1974).

Media Effectiveness and Credibility. French and Crask (1974) tested several aspects of elderly usage of, and attitude toward, mass media. That study confirmed the usage patterns described above, but it also reported that the elderly found television to be their most reliable information source. The data from that study showed that advertising in general is not only important as a source of information, but also serves as a motivator for the buying decision. A majority of the respondents in the French and Crask (1974) study (72 percent) said that advertising was an important source

of information to them, while 55 percent said that advertising influenced their product choice.

The same research also examined the advertising content and effectiveness. The conclusion drawn from that data is that advertising directed at the broader market, rather than specifically targeted to the elderly, will receive higher recall scores by the elderly.

The data above is consistent with John Howard's observation that "You have a psychological thing here. Many people don't want to be reminded that they are old, and they often tend to react against advertising and marketing programs that separate them from the masses" (Business Week, November 20, 1971).

#### Point-of-Purchase in the Decision Process

One of the author's earliest studies examined the elderly female consumer and her apparel purchasing (Martin, 1971). That data showed that "the older woman shops in fewer stores, both in the aggregate and on the day of purchase." In addition that study reported that the elderly woman consumer was seldom accompanied by a "shopping pal" and tended to shop and buy in either high fashion women's specialty stores or in traditional full-line department stores. Confirming this was the finding by Bernhardt and Kinnear (1976) that the elderly segment does less shopping as a group than do younger segments and that they favor shopping in traditional department stores, particularly for apparel. The conclusion drawn is that the elderly consumer relies very little on peer word-of-mouth information in the decision process. Not only do the elderly tend to eschew the newer forms of retailers such as discounters (Bernhardt and Kinnear, 1976) and concentrate on more traditional channels, but they are more reliant on salespersons for the point-of-purchase information in their decision process (Martin, 1971).

Conversely, a recent study that deals with information processing by the elderly (Bearden and Mason, 1979) reports a consistent lack of familiarity with three point-of-purchase shopping aids, but usage of those three by the elderly in their buying decision. The three aids tested were unit pricing, nutritional labeling and open-code dating. The data show the elderly shopper's familiarity with the three was significantly less than a national average. Again, the paradox uncovered by the researchers is a lack of familiarity, but usage. This suggests, for instance, that open-date coding serves as an assurance to the elderly consumer that the product is fresh, though there is a lack of understanding of how the dating system operates or what it represents.

Certainly the studies cited concerning the impact of point-of-purchase attributes are limited, but they do minimally suggest a hypothesis that marketer supplied information at the point-of-purchase apparently contributes significantly to the buying decision, though the mechanism by which this affects the decision is unclear.

#### New Behavioral Data

Recently the author concluded another study of elderly consumers which, while concentrating on their purchase of financial retirement services, does add to the construct of buyer behavior. In this recent effort we examined the elderly consumers' use of various types of investments, debt instruments, sources of financial advice, and attitudes toward financial management services. To facilitate this study we examined the similarities and differences between the elderly and non-elderly segments in terms of the dimensions noted a-

bove.

#### Data

The data are drawn from a recent survey conducted by the Survey Research Center, Institute for Social Research, University of Michigan. Questions pertaining to financial matters were included in the June, 1980, "Survey of Consumer Attitudes."

The national telephone survey consisted of interviews with some 688 adult men and women living in households in the coterminus United States. The national probability sample was selected utilizing a computer algorithm designed by SRC to randomly generate phone numbers. Of the 688 respondents, 26.1 percent were 60 years of age or older.

The questionnaire was designed by the author with two waves of pre-tests before inclusion in the June survey. All interviewing was conducted by the SRC's professional interviewing staff.

#### Results

Particularly important for this paper were the areas concerning behavior and attitudes toward retirement planning.

In that context the sources of advice which elderly consumers rely upon in making investment decisions are of interest. As Table 1 shows, we see a very similar pattern across the two segments. The most significant difference is in terms of the use of friends as an investment advisor. The elderly are much less likely to use this source, similar to the data uncovered in retail buying behavior and discussed earlier in this paper.

TABLE 1  
INVESTMENT ADVISORS

(Percentage of Respondents by Age Class)

Investment Advisor Currently Used	Age	
	Under-60	Over-60
Accountant	3.4	5.2
Banker	9.4	10.1
Broker	1.5	3.2
Tax Advisor	2.6	2.8
Lawyer	2.5	1.1
Friends	18.3	5.5

The most striking divergence between the elderly and non-elderly segments appears not in behavior, but rather in attitudes. The elderly perceive investment decision-making as less difficult than do their younger counterparts, as Table 2 shows. Moreover, they eschew paying for advice. In fact, even if the choice were affordable, both the elderly and non-elderly segments would rather do their own financial planning than hire an advisor.

TABLE 2  
ATTITUDES TOWARD INVESTMENT DECISIONS AND SERVICE

(Percentage of Respondents by Age Class)

Attitude	Age	
	Under 60	Over 60
Would pay for investment advice	24.9	7.1
If choice were affordable:		
Hire investment advisor	16.5	17.2
Do own planning	79.6	72.0
Difficulty of investment decision/making:		
Very difficult	24.8	19.1
Some difficulty	32.7	18.1
Not at all difficult	37.1	47.2

Despite this apparent self-reliance, it is alarming that only 12.9 percent of the elderly report having a financial plan in place, compared to 27.1 percent of those under 60. Of those who do not, a very small minority - 12.5 percent - indicated that they would pay someone to put such a plan together for them.

#### Conclusions

The amount of substantive research on the elderly market segment is meager compared with that generated for other segments of the market. This is probably due in part to the marketer's fascination over the past twenty years with the so-called "youth market."

We have a growing market segment that is becoming proportionally larger in the general population and which has substantive buying power potential. The segment is heavily dominated by women consumers, but very little research has examined the differences by sex in the purchasing behavior of the elderly.

The various studies cited here and our own research suggests we have a non-seeker of product and brand information. What research we have shows a reliance on impersonal information sources at the point-of-sale, and the disdaining of information from peers, particularly those who might be "shopping pals." In other words, we have an elderly consumer that is a "loner" and relies on past experiences and familiarity and, to some extent, on marketer generated information at the point-of-sales.

When information is generated away from the point-of-sale the data shows the greatest time devoted to television (consistent with the overall media usage of the general population), but our data suggest that newspaper information is more important and is used in the buying decision. There is a resulting conclusion that information at the point-of-sale, and impersonal information generated in the mass media are the principal information sources used by the elderly in the buying decision.

We also conclude that information content is most effective when it is not segment specific, but rather has a more general appeal to it, particularly bridging different age segments.

There is a caveat to the development of such an overall concept of market information acquisition by the elderly. In a 1975 study, our data showed that the elderly market was not homogeneous, but rather consisted of

several major sub-segments (Towle and Martin, 1976). Using 13 demographic, 20 psychographic and 10 buying style measures there were six distinct sub-segments of the elderly market identified.

Certainly future researchers must be aware of this lack of homogeneity in examining the elderly market and its possible sub-segments. However, the need to expand the research into a conceptualization of the elderly consumer's buying behavior and how it differs from the younger segments is called for. Hopefully the outline of certain dimensions of that behavior reported here will be helpful for future researchers.

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WHITE/BLUE COLLAR CLASS STATUS AND CUSTOMERS' PREFERENCE AND USAGE BEHAVIOR  
TOWARD BANKING METHODS: AN ATTITUDE ORIENTATION

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Abstract

Using an attitude orientation, the study focuses on the direct assessment of preference and usage behavior differences toward selected banking methods among consumers who socially perceive themselves as either a blue collar-oriented individual or a white collar person. The findings indicate significant preference pattern differences as well as isolated psychographic and socioeconomic characteristics; but fail to demonstrate conclusive evidence of significant usage behavior differences between the customer groupings.

Introduction

The concept of social class status has long been thought to influence individuals' preference and behavior patterns toward a wide variety of economic goods and services. Consumer research findings relevant to social class over the past two decades have led investigators to the tentative belief that preference as well as behavior patterns differ from one class to the next. While most researchers are in general agreement that social class membership is determined by an individual's status on several socioeconomic factors, attempts to relate social class differences to specific consumer behaviors have resulted in less than conclusive results. Martineau (1958) reported information tentatively supporting his contention that social class affects perceived risk, choice making, and store selection among other factors. Mathews and Slocum (1969) found the existence of social class differences among consumer groups' usages of credit cards. Similarly, Settle, Alreck, and Belch (1978) established social class differences in respect to various leisure activities. Whereas, Rich and Jain (1968), on the other hand, noted only weak differences between social classes with respect to sources of shopper information, interpersonal influences, fashion interests, or other factors influencing shopping behavior. Additionally, Hirschman (1979) found consumers' social class status to be a poor predictor of differences in consumers' in-store purchasing behavior as well as their credit card payment patterns.

Some researchers have contributed the unequivocal results of social class status with respect to consumers' preference and behavior patterns as being a result of the confusing issues which yet surround both the theoretical construct of social class and the behavior patterns that are supposed to be affected by social class. There are some problems in identifying the behavioral effects of class membership. More specifically, some researchers feel that even though brand/store preferences may differ by social class, the individual's actions may be constrained by situational factors that are not related to social status (Settle, Alreck, Belch, 1978; Kelly, 1975). Furthermore, most researchers agree an individual's social class membership is a derivative of that person's status on several socioeconomic factors but there is still lack of clear consensus about what variables should be included or what weight should be placed on each (Hirschman, 1979; Settle, Alreck, Belch, 1978).

Most research efforts to understand relationships between social class status and consumers' marketplace behavior have focused on sets of consumer-related state of being factors (i.e., educational status, family income, marital status, occupational status, type of employment, etc.) as being the salient elements for determining individuals' class status. As a result, researchers have classified consumers into one of the traditionally accepted social status classification schemes such as Warren's (1960) or some modification thereof, such as the more pragmatically accepted white/blue collar social class structure scheme (see for example, Settle, Alreck, Belch, 1978). An alternative conceptualization of social class status which has, for the most part, gone empirically untreated is that of viewing the social class status concept from a perceived attitude orientation.

This paper focuses on the direct assessment of preference and usage behavior differences toward selected banking methods among consumers who perceive themselves as either blue collar-oriented individuals or a white collar person. Additionally, assessments of socioeconomic and psychographic characteristic differences between the two test groups are made. The assessment of possible preference and behavior patterns as well as socioeconomic and psychographic characteristic differences were derived through testing the following hypotheses:

- H<sub>1</sub>: White collar-oriented customers exhibit significantly different preference patterns toward specific banking methods than do blue collar-oriented customers.
- H<sub>2</sub>: White collar-oriented customers exhibit significantly different usage behavior patterns of the banking methods than do blue collar-oriented customers.
- H<sub>3</sub>: Significant socioeconomic and psychographic characteristic differences exist between the white collar and blue collar-oriented customer groups.

Methodology

Research Procedure

The research procedure used to collect the necessary data was a direct mail survey, characterized as being descriptive and exploratory in nature. A specific cover letter was attached to a carefully designed self-administered questionnaire to enhance the participation of the selected bank customers as well as assure the legitimacy of the study. The true purposes of the study were disguised in an effort to prevent possible extraneous biases from entering the study. Additionally, a twenty-five cent token incentive plan was implemented as a method to encourage the respondent's participation.

Population

The population under study was defined as adult male and female residents of a large southern metropolitan city having at least a current savings or demand



deposit account with a particular commercial bank institution located in the city. The decision to use only customers from one specific bank enhanced control for differences in bank images, selling or promotional procedures, and/or special services offered to a customer.

Sample Design, Technique, and Data Collection Method

A probabilistic simple random sampling technique was employed to draw a representative sample of 600 individuals from the bank's central bank account files. Those customers selected as prospective respondents were mailed the quarter incentive-cover letter and questionnaire along with a self-addressed, stamped return envelope. A total of 348 usable questionnaires were returned to a registered Post Office mail box by the specified deadline date.

Questionnaire

The instrument used to collect the data necessary for the study was a detailed self-administered questionnaire designed to allow the respondent, himself, to read, interpret, and respond to each question in the comfort of his home in elude of any interviewer's presence, thus reducing the possibilities of any interviewer bias entering the investigation. A combination of direct and indirect scale measurements were designed and pretested, by a convenience sample, to assess the subjects' preference and behavior patterns toward several specific banking methods as well as selected demographic and psychographic characteristics. To assess the variability and sensitivity among the subjects' attitudinal and preference responses, the scale measurements were designed having either ordinal, interval or ratio scaling properties.

Attitude-Oriented Social Class Status Test Groups

For purposes of this exploratory endeavor to investigate individuals' social class status from an attitude orientation, respondents were asked to respond to the following question: "Socially, I see myself more as a blue collar individual rather than a white collar person" by using a modified, six point Likert-type scaling scheme that ranged from "definitely agree" to "definitely disagree." Preliminary analysis of the data structure associated with the white/blue collar psychographic statement indicated the existence of three distinct test groups, described as:

White Collar.--respondents who either generally or definitely disagreed with the psychographic statement.

White-Blue Collar.--those individuals who only either slightly agreed or slightly disagreed with the statement.

Blue Collar.--customers who either generally or definitely agreed with the psychographic statement.

Although the data structure of the total sample revealed three separate distinct social class status groupings, only the two extreme groupings: white collar (N = 144) and blue collar (N = 132) were included for testing of the given hypotheses in this paper.

In testing (H<sub>1</sub>), respondents were asked to rate five specific banking methods on the basis of desirability of use. By using a modified Likert-type scaling scheme that ranged from "(I) definitely like using this method" to "(I) definitely dislike using this method," preference mean values for the five banking methods were computed for each test group. Between group preference pattern differences for each banking method were tested for significance using the Z test procedure. Table 1 presents the summary of the means, standard deviations, and standard errors of the preference measure relevant to each banking method for the two customer groupings. Also reported in the table are the results of the means difference test for each banking method.

TABLE 1  
PREFERENCE DIFFERENCES OF CUSTOMERS' PERCEIVED DESIRABILITY TO USE SELECTED BANKING METHODS

Analyzed by: Banking Methods, Blue/White Collar Customer Groupings, Desirability Means, Standard Deviations, Standard Errors and Significant Values

Banking Methods	Blue and White Collar Groupings						Signi- <sup>b</sup> ficant Value
	Definitely Blue-Collar Oriented (N = 132)			Definitely White-Collar Oriented (N = 144)			
	Mean <sup>a</sup> Value	Standard Deviation	Stan- dard Error	Mean <sup>a</sup> Value	Standard Deviation	Stan- dard Error	
Inside the Bank	3.05	.711	.063	3.42	.688	.060	p ≤ .001
Drive-up Window	3.52	.737	.071	3.16	.952	.984	p ≤ .001
24-Hour Machine	2.72	1.274	.126	2.80	1.133	.105	NSD
Bank by Mail	2.01	1.072	.105	2.25	1.178	.105	p ≤ .1
Bank by Phone	1.89	1.024	.100	1.83	.923	.084	NSD

<sup>a</sup> Measurement Scheme: 4 = Usually  
3 = Occasionally  
2 = Rarely  
1 = Almost Never

<sup>b</sup> Significant Value: NSD denotes that the means difference test results indicated NO SIGNIFICANT DIFFERENCE at the .1 level.

Interpretation of the means difference test results clearly indicates the existence of significant differences in preferences toward using the selected bank methods between customers who perceive themselves as being blue collar-oriented and those who see themselves as white collar. More specifically, the findings tend to demonstrate that white collar-oriented customers, on the average, exhibit a somewhat stronger preference toward using inside the bank facilities (mean = 3.42), as the desirable, or preferred, manner for handling their banking matters than did the blue collar customers (mean = 3.05). This difference in preference was significant at the .001 level. Additionally, the bank by mail method was preferred significantly more, at the .1 level, by white collar customers (mean = 2.25) than by blue collar individual (mean = 2.01). Although a preference difference existed between the two classes, the method, itself, was viewed as being a less desirable manner for which to conduct banking matters than either the inside the bank, drive-up window, or 24-hour machine methods. Furthermore, the findings demonstrate that blue collar customers exhibit a significantly stronger preference, at the .001 level, toward the drive-up window method of banking (mean = 3.52) than the white collar customers (mean = 3.16). The findings fail to demonstrate

significant preference differences between the two customer groups for either the 24-hour machine or bank by phone methods. On the basis of these findings, one would have to conclude that preference differences do exist between white and blue collar customers in respect to their desire to use a selected banking method as a manner for handling various banking matters; thus supporting the first hypothesis.

To test the second stated hypothesis relevant to banking method usage behavior differences between the customer groupings, similar analysis procedures were followed as before. In assessing the degree to which the respondents use each of the different banking methods, customers were asked to rate the methods on the basis of their perceived usage experience. Using a direct, four-point rating scale ranging from "usually" down to "almost never," means were computed and subjected to a means difference test. Interpretation of the results from Table 2 indicates that usage behavior differences between the two customer groups exist only for the drive-up window method, at the .01 level. That is, blue collar-oriented customers, on the average, perceive themselves using the bank's drive-up window (mean = 3.36) occasionally more often to conduct their banking transactions than do white collar customers (mean = 3.07). The findings fail to demonstrate any significant usage behavior differences in respect to the other banking methods. In light of the, at best, marginal results, one would have to be cautious to conclude that the findings were in support of the hypothesis. Additional analysis, beyond the scope of this paper, should be made to further investigate the possibilities of banking methods usage differences and white and blue collar customers.

TABLE 2  
USAGE BEHAVIOR DIFFERENCES OF CUSTOMERS'  
ACTUAL USAGE OF THE SELECTED BANKING  
METHODS

Analyzed by: Banking Methods, Blue/White  
Collar Customer Groupings, Usage  
Means, Standard Deviations, Standard  
Errors and Significant Values

Banking Methods	Blue and White Collar Groupings							
	Definitely Blue-Collar Oriented (N = 132)				Definitely White-Collar Oriented (N = 144)			
	Mean <sup>a</sup> Value	Standard Deviation	Standard Error	Mean <sup>a</sup> Value	Standard Deviation	Standard Error	Significant Value <sup>b</sup>	
Inside the Bank	1.23	.726	.063	3.38	.692	.055	NSD	
Drive-up Window	3.36	.730	.066	3.07	.985	.084	p ≤ .01	
24-Hour Machine	2.11	1.235	.118	2.31	1.200	.105	NSD	
Bank by Mail	1.64	1.001	.095	1.76	1.074	.095	NSD	
Bank by Phone	1.28	.621	.063	1.34	.667	.055	NSD	

<sup>a</sup> Measurement Scheme: 4 = Usually  
3 = Occasionally  
2 = Rarely  
1 = Almost Never

<sup>b</sup> Significant Value: NSD denotes that the means difference test results indicated NO SIGNIFICANT DIFFERENCE at the .1 level.

For determining significant psychographic and demographic characteristic differences between the two customer groups, the respondents were asked to self-rate themselves on thirteen specific psychographic statements and eleven selected socioeconomic factors. Prior analysis of the psychographic dimensions through the use of R-type factor analysis (Nie, et al., 1975) and varimax rotation of the principal components

revealed the existence of seven life style dimensions significant at the .1 level or higher. For each dimension, the mean values of the separate within elements were computed for each customer sub-group and tested for significant difference using the Z test procedure. Table 3 presents the summary of the means and standard deviations of the individual psychographic factors by dimensions for the customer groups. Also reported are the results of the means difference test for each statement.

TABLE 3  
COMPARISON OF WITHIN DIMENSION PSYCHOGRAPHIC MEAN  
DIFFERENCES BETWEEN WHITE AND BLUE COLLAR  
ORIENTED BANK CUSTOMERS

Analysis by: Life Style Dimension, Mean Value,  
Standard Deviation, and Significant  
Value

Life Style Dimension and Statements <sup>a</sup>	Blue and White Collar Groupings				Significant Value <sup>b</sup>
	Mean Value	Standard Deviation	Mean Value	Standard Deviation	
<b>FINANCIAL OPTIMIST</b>					
Five years from now the family income will probably be a lot higher than it is now.	4.73	1.554	4.63	1.626	NSD
I will probably have more money to spend next year than I have now	4.38	1.561	4.49	1.542	NSD
<b>FINANCIAL DISSATISFIEDNESS</b>					
I wish we had a lot more money.	5.22	1.125	4.99	1.324	NSD
Unexpected situations often catch me without enough money in my pocket.	4.02	1.561	3.06	1.640	p ≤ .001
<b>INFORMATION EXCHANGER</b>					
I often seek out the advice of my friends regarding a lot of different things.	4.09	1.422	3.88	1.471	NSD
My neighbors or friends often come to me for advice.	4.04	1.427	4.31	1.313	p ≤ .1
<b>CREDIT USER</b>					
I buy many things with a credit/bank card.	3.56	1.946	3.78	1.790	NSD
It is good to have charge accounts.	4.75	1.411	4.94	1.277	NSD
I like to pay cash for everything I buy (reversed)	4.43	1.549	3.83	1.642	p ≤ .001
<b>ADVERTISING VIEWER</b>					
I am definitely influenced by advertisements.	3.34	1.434	3.19	1.284	NSD
For most products and services, I try the ones that are most popular.	4.36	1.353	3.65	1.440	p ≤ .001
<b>FAMILY ORIENTED PERSON</b>					
Safety and security for my family are most important to me.	5.94	.024	5.69	.822	p ≤ .001
<b>PRICE CONSCIOUS PERSON</b>					
A person can save a lot of money by shopping for bargains.	4.99	1.088	4.81	1.202	NSD

\* All the psychographic statements are significant at the .1 level of significance or better.

<sup>a</sup> Measurement Scheme: 6 = Definitely Agree; 5 = Generally Agree; 4 = Slightly Agree; 3 = Slightly Disagree; 2 = Generally Disagree; 1 = Definitely Disagree.

<sup>b</sup> Significant Value: NSD denotes that the means difference test results indicated NO SIGNIFICANT DIFFERENCE at the .1 level.



Interpretation of the results demonstrates the existence of several distinct within psychographic dimensional differences between blue and white collar-oriented bank customers. While blue collar customers tend to agree that they like paying cash for all their purchased products (mean = 4.43), more than white collar individuals (mean = 3.83), they view themselves as being caught more often by unexpected situations without enough money on hand (mean = 4.02) than do the white collar customers (mean = 3.06). Furthermore, blue collar customers demonstrate significantly higher concerns for the safety and security of their families (mean = 5.94) and accepted brand name products (mean = 4.36) than do the customers perceiving themselves as being white collar-oriented individuals. All these psychographic differences tested to be significant at the .001 level. In contrast, the findings indicate that white collar customers (mean = 4.31) significantly more so, at the .1 level, than blue collar persons (mean = 4.04) tend to view themselves as self-proclaimed opinion leaders giving advice to their neighbors or friends.

To investigate the existence of possible demographic characteristic differences between the two subgroupings, the groups were cross-tabulated with eleven socioeconomic items included in the study and the Chi-square statistic used to measure statistical significance at the .05 alpha level. The results reported in Table 4 indicate the existence of significant demographic differences between the two social class status groups within five of the socioeconomic items. Interpretation of the findings tends to point out that significantly more white collar customers (16%) are newcomers to the community's structure having lived in the area for three years or less in comparison to blue collar individuals (5%). Whereas, blue collar customers (81%) tend to be more established within the community's social structure for over a decade than are the white collar customers (69%). Educationally, the white collar group exhibits a significantly higher level of educational experience with 63% holding at least a college degree as compared to only 20% of the blue collar individuals. Another significant difference exists within the occupation status dimension. White collar individuals (57%) are employed more in some type of professional-oriented position than are blue collar customers (19%). Whereas, blue collar people dominate the technical/clerical (32%), skilled labor (18%) and semi- and unskilled (8%) type jobs. With respect to union membership status, more white collar customers (98%) perceive their jobs as being non-union in nature than do the blue collar (67%). Finally, family income level differences were demonstrated within several of the specific income ranges. Significantly more blue collar customers (51%) indicated their family income to be between \$10,000 and \$24,999. Whereas, more white collar individuals (40%) reported incomes between \$25,000 and \$50,000. On the basis of the findings, it can be tentatively concluded that psychographic as well as demographic differences do exist between the two social class status subgroups of bank customers which can be used to further isolate and describe the members within each subgroup.

#### Implications

**Hypothesis 1:** White collar-oriented customers exhibit significantly different preference patterns toward specific banking methods than do blue collar-oriented customers.

The findings tend to support the postulated existence of preference differences toward using selected banking methods between customers who perceive themselves

as being a member of the white collar social class status and those perceiving blue collar status. Several significant implications can be drawn from the reported findings. First, the empirical evidence of the existence of preference differences toward selected banking methods lends support to the premise that the concept of social class status can be interpreted, in part, through a self-reporting attitude orientation. Consequently, recognition of this viable alternative conceptualization of social class status will afford researchers and practitioners, alike, new insights into the appropriateness of not only the traditional measurements of social class status but also the importance of including some type of psychological frame of reference as a specific variable.

TABLE 4  
DEMOGRAPHIC DESCRIPTION OF CUSTOMERS WHO  
PERCEIVED THEMSELVES AS WHITE COLLAR AND  
BLUE COLLAR INDIVIDUALS

	Definitely White Collar Oriented	Definitely Blue Collar Oriented	Signi- ficant Value
<b>Sex of Respondent</b>	(N = 144)	(N = 132)	
Male	50	55	
Female	50	45	
<b>Length of Residence in Area</b>	(N = 144)	(N = 132)	
2 years or less	16	5	a
4-10 years	15	14	
11 years or more	69	81	a
<b>Length of Current Residence</b>	(N = 144)	(N = 132)	
3 years or less	42	37	
4-10 years	29	23	
11 years or more	29	40	
<b>Employment Status</b>	(N = 144)	(N = 132)	
Full Time	67	62	
Part Time	10	11	
Not Employed	23	27	
<b>Marital Status</b>	(N = 144)	(N = 132)	
Married with children	47	55	
Married without children	16	11	
Single, Widowed, Divorced, Separated	37	34	
<b>Spouse's Employment Status</b>	(N = 90) <sup>b</sup>	(N = 87) <sup>b</sup>	
Full Time	50	51	
Part Time	8	5	
Not Employed	42	44	
<b>Level of Education</b>	(N = 144)	(N = 132)	
High school degree or less	8	40	a
Some college or technical school	29	40	a
College degree, graduate studies or advance degree	63	20	a
<b>Age of Respondent</b>	(N = 144)	(N = 132)	
25 or under	20	17	
26 - 55	59	53	
56 or over	21	30	
<b>Occupation</b>	(N = 144)	(N = 132)	
Professional	57	19	a
Technical/Clerical	18	32	a
Skilled Labor	3	18	a
Semi- or Unskilled	-	8	a
Not in labor force	22	23	
<b>Non-Union/Union Status</b>	(N = 134) <sup>c</sup>	(N = 121) <sup>c</sup>	
Non-union	98	67	a
Union	2	33	a
<b>Income Level</b>	(N = 138) <sup>c</sup>	(N = 128) <sup>c</sup>	
Under \$10,000	11	19	
\$10,000 - \$24,999	37	51	a
\$25,000 - \$50,000	40	26	a
Over \$50,000	12	4	

\*All figures are percentages of their respective sample size.

<sup>a</sup>Within categorical demographic differences significant at .05 level.

<sup>b</sup>N value is smaller because of a qualifying constraint associated with the question.

<sup>c</sup>N value represents only those respondents who answered that corresponding question. No answers were excluded from the analysis.

Second, support of the existence of an attitudinal dimension associated with the traditionally accepted blue collar/white collar classification scheme provides researchers new insights in the predictive powers of social class status serving as a meaningful discriminatory factor in determining consumers' preference patterns toward economic goods and services.

Hypothesis 2: White collar-oriented customers exhibit significantly different usage behavior patterns of the banking methods than do blue collar-oriented customers.

Several implications can be drawn from the reported findings of the behavior pattern hypothesis. First, the lack of conclusive support toward the postulated existence of usage behavior differences between the bank customer groupings toward selected banking methods, raises questions to the predictive powers of an attitude-oriented social class status scheme in determining, or understanding, individuals' usage behavior patterns. That is, bank customers' own attitude assessment of their association with a given social class status (i.e., blue-white collar), by itself, tends to be a relatively weak indicator of their usage behavior of available banking methods.

Second, the findings tend to demonstrate support to the known notion that actual purchase, or usage, behavior actions are influenced by a combination of environmental and intrapersonal factors of which none, by themselves, may prove to be salient in nature. Further research is needed to assess the impact of the psychological dimensions, relevant to social class status, on customers' behavior actions and patterns.

Hypothesis 3: Significant socioeconomic and psychographic characteristic differences exist between the white and blue collar-oriented customer groups.

The supportive findings toward this hypothesis tend to fortify the notion that individuals who perceive themselves as having white collar, social class status are, in part, different from those maintaining a membership described as blue collar in nature. Additionally, the findings tend to lend support toward studying the concept of social class status from an attitude orientation. As a result, bank management and researchers may gain fruitful insights toward better understanding the concept of social class status and its impact as a partial predictor of consumers' banking preference and behavior patterns as well as the various market segments and their members' decision processes underlying banking method choices.

#### Conclusions

This study recognizes that the social class status concept has psychological dimensions for which consideration should be given when assessing its predictive powers as well as descriptive capabilities toward customers' banking preference and behavior patterns.

Future research on social class status should continue to investigate the relationships between the psychological dimensions relevant to consumers' perceived attitudes toward class status membership and varying marketplace behaviors. Findings tend to be supportive of this researcher's conviction that no longer can social class researchers completely ignore the potential importance of or the relative impact of the attitudinal dimensions with the factor of social class status.

Once more is learned and understood about social class status as a perceived attitude, more meaningful direct applications may emerge. These applications should be beneficial not only to marketing decision makers (i.e., bank executives), but also society as well.

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THE DIFFERENTIAL IMPACT OF BELIEFS ON  
INTENTIONS TO TRY AND INTENTIONS TO ADOPT CIGARETTES\*

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Abstract

Intentions to try a cigarette were predicted significantly better by the Ajzen and Fishbein model when the attitudinal and normative components were operationalized in terms of beliefs specifically related to "trying" than when operationalized by beliefs specifically related to "smoking," and intentions to smoke were predicted significantly better by the model when the components were operationalized in terms of beliefs related to "smoking" than when operationalized by beliefs related to "trying." The magnitude of the differences was so small however that Fishbein's suggestions for improvements in the content of smoking prevention programs, aimed at adolescents, do not appear to be warranted.

Much of the recent research on consumer choice is influenced by the conceptual framework of cognitive social psychology. This framework emphasizes the importance of beliefs, attitudes, and intentions as the most immediate determinants of behavior.

Trial versus Adoption

In applying this approach the assumption is implicit that the beliefs which underlie attitudes, which in turn underlie intentions, which in turn underlie brand purchase behavior (Fishbein and Ajzen, 1975), are the same beliefs which underlie trial of a brand. See Green and Srinivasan (1978), Green and Wind (1973), and Wilkie and Pessemier (1973) for instances of this implicit assumption in conjoint analysis, multidimensional scaling, and multiattribute attitude modeling. This assumption may not always be correct however. As Fishbein has observed, the set of beliefs which underlie one type of behavior may be irrelevant to another type of behavior:

"there are a large number of beliefs that are material for any given smoking decision. It is important to realize, however, that a belief that may be material to one smoking decision (e.g., starting to smoke) may be immaterial to another (e.g., continuing to smoke)..." (Fishbein, 1977, p. 24).

If the beliefs which underlie trial of a product are in fact different from those which underlie adoption or purchase, this could have important implications for policy. In the case of cigarette smoking for instance, the best appeals to use in prevention programs aimed at adolescents may be quite different if the objective is to dissuade adolescents from trying a cigarette than if the objective is to dissuade them from becoming a cigarette smoker. The difference in objectives is particularly important in the case of cigarette smoking where trial is often tantamount to becoming a smoker due to the physiological (Goodman, 1968; Schachter, 1977)

and psychological dependence producing properties of cigarettes (Russell, 1974). (A fact unbeknown to most adolescents.)

In a recent and comprehensive review of the public literature on consumer beliefs and attitudes towards cigarette smoking, Fishbein came to the conclusion that although anti-smoking campaigns have played a major role in reducing generic demand for cigarettes, many anti-smoking campaigns failed "primarily due to (a) the selection of inappropriate arguments and/or (b) a failure to select a sufficient number of appropriate arguments" (Fishbein, 1977, p. v).

Purpose of Study

This distinction between "trying" or "smoking" is one aspect of the more general issue of "correspondence" which has been raised in the application of the Ajzen and Fishbein model (Ajzen and Fishbein, 1975). According to Fishbein and Jaccard (1973), a behavioral intention involves four distinct aspects: an action, the object toward which the action is directed, the situation in which the action occurs, and the time at which the action occurs. Predictions of intentions using the Ajzen and Fishbein model are expected to be greater when a high correspondence exists, along these four aspects, between the attitudinal and normative components of the model and intentions. Previous research has already demonstrated the effect of correspondence with respect to the object (Davidson and Jaccard, 1975; Fishbein and Jaccard, 1973) and with respect to situational (as well as object) aspects (Schlegel, Crawford, and Sanborn, 1977). This study investigated the effects of correspondence with respect to alternative actions, trying and smoking, directed toward the same object, cigarettes.

Method

Respondent Selection

To provide an appropriate test of the hypothesis, adolescents, who are presently in the stage when cigarette smoking typically is initiated, were selected as respondents. Bynner (1969) reported a progressive increase in smoking rates over the period from ages 11-15 (4% at age 11, 9% at age 12, 17% at age 13, 27% at age 14, and 38% at age 15). Although some surveys (Adult Use of Tobacco, 1975) provide evidence that smoking began in some cases as early as age 6, we selected students in grades six through twelve. All 4620 students in one county school system in a mid-western state were investigated.

Questionnaire Design and Administration

Attitude toward the act (Aact) was derived by multiplying subjects' beliefs about the consequences of the behavior by their evaluation of those beliefs. Thirteen belief items were generated by a review of the relevant literature and these beliefs were pilot tested with a

\*This research was supported by NIH Grant No. HD13449-01.

separate but similar sample of students. Following Fishbein's (1977) recommendations, all beliefs were stated in a personally relevant way rather than in terms of the general consequences of the behavior of interest. Subjects indicated their degree of belief for each item on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree."<sup>1</sup> Parallel forms of each of the 13 beliefs were constructed for "smoking" and for "trying" (e.g., "If I smoke (try) cigarettes I will feel good."). Beliefs were evaluated on a 5-point Likert scale ranging from "very bad" to "very good." (e.g., "If I feel good that will be:").

Normative beliefs concerning four different referents' expectations for smoking behavior were measured on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The four referents were: friends, parents, best friend, and steady boy/girl friend. (e.g., "My friends think that I should smoke (try) cigarettes."). Parallel forms were constructed for "smoking" and "trying."

Behavioral intentions concerning each of the two behaviors, smoke and try, were measured on a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." (e.g., "I plan to smoke (try) cigarettes a year from now.").

Smoking status was measured on a 6-point scale: (1) "I have never smoked a cigarette, not even a few puffs." (2) "I have smoked a cigarette or a few cigarettes 'just to try' but I have not smoked in the past month." (3) "I no longer smoke but in the past I was a regular smoker." (4) "I smoke regularly but no more than one cigarette a month." (5) "I smoke regularly but not more than one cigarette a week." (6) "I smoke more than one cigarette a week."

The questionnaire was group administered by a research team whose members were unaffiliated with the school system. Respondents were instructed that their responses would be kept strictly confidential.

### Results

As expected, a significant percentage of these respondents had experienced cigarette smoking but most were still at the stage when the decision to try a cigarette and the decision to become a smoker was imminent. For purposes of analysis all respondents who endorsed Item 1 ("I have never smoked a cigarette, not even a few puffs.") were classified as "nonsmokers." The percent of nonsmokers in grades 6 to 12 were: 65.8, 55.8, 47.3, 37.1, 35.5, 28.7, and 27.7. Only the results for the nonsmokers are reported here.

To test the hypothesis, the procedure used by Schlegel, Crawford, and Sanborn (1977) was adopted. (All analyses were performed on a randomly selected 2/3 of the sample. Predictions to the remaining 1/3 "hold out" sample showed R very close to those obtained in the main sample.) Intentions to smoke and intentions to try cigarettes were each predicted by multiple regression using corresponding and noncorresponding beliefs. That is, intentions to try (smoke) were predicted by beliefs relating to both trying and smoking. Predictions were generated for each of two grade levels, middle school (6, 7, 8) and high school (9, 10, 11, 12). The multiple

<sup>1</sup>In our pilot testing, likelihood scales were used to measure both intentions and beliefs, but this caused difficulty among the younger subjects. For this reason a Likert scale was adopted for both intentions and beliefs.

correlation coefficients and beta weights for each component of the model are presented in Table 1. The model significantly predicted intentions in every condition, but as hypothesized, when the intentions measure and the beliefs corresponded the accuracy of prediction was significantly higher in every case ( $p < .05$ ).

TABLE 1

PREDICTION OF INTENTIONS USING CORRESPONDING AND NONCORRESPONDING BELIEFS

Grade Level Predictors Specific to	Intentions Specific to	
	Smoke	Try
<u>Middle School</u>		
<u>Smoke</u>		
R	.39**	.33**
$\beta$ Aact	.25**	.20**
$\beta$ NB	.25**	.21**
(649) <sup>a</sup>		
<u>Try</u>		
R	.36**	.39**
$\beta$ Aact	.14**	.12**
$\beta$ NB	.31**	.35**
(649)		
<u>High School</u>		
<u>Smoke</u>		
R	.43**	.33**
$\beta$ Aact	.24**	.22**
$\beta$ NB	.30**	.20**
(500)		
<u>Try</u>		
R	.39**	.37**
$\beta$ Aact	.10**	.18**
$\beta$ NB	.36**	.30**
(500)		

<sup>a</sup>Number of subjects

\*  $p < .05$

\*\* $p < .01$

Moreover the pattern of beta weights across conditions changed as corresponding or noncorresponding beliefs were used. When intentions to smoke were predicted by beliefs relating to smoking the Aact and NB components were found to be equally important for middle schoolers and NB was slightly more important for high schoolers. But when intentions to smoke were predicted by beliefs relating to trying, NB was of greater importance among middle schoolers and high schoolers. Similarly, when intentions to try were predicted by beliefs relating to trying the NB component was of greater importance than the Aact component for both middle and high schoolers. But when intentions to try were predicted by beliefs relating to smoking the two components were of equal importance for both middle and high schoolers.

### Discussion

The results supported the hypothesis at a "statistically significant" level, but the absolute magnitude of the difference was very small in every case. Fishbein's (1977) suggestion that promotional messages designed to dissuade adolescents from smoking would be improved if these messages were highly specific therefore do not receive strong support from this study. On the other hand, the change in the pattern of relative importance of the Aact and the NB components does suggest

differences of practical significance, depending upon the beliefs used. For instance the greater importance of the NB component for trying a cigarette suggests that appeals directed at this component might be more effective than appeals directed at the attitudinal component.

Perhaps the more important result of this study, however, is the relatively small percentage of variance (19%) explained by the Ajzen and Fishbein model in even the best condition (for intentions to smoke among high school students). This poor performance of the model occurred even though great effort was made to identify beliefs and referents relevant to smoking behavior and these beliefs were expressed in personally relevant terms as suggested by Fishbein (1977). More research is required to identify those variables which explain the variability not accounted for by the Ajzen and Fishbein model.

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CONTRASTING CUSTOMER PERCEIVED  
STORE IMAGE WITH MANAGEMENT'S  
SELF PERCEPTION: A  
DIAGNOSTIC APPROACH

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Abstract

Recent work indicates the desirability of studying managers' store image as well as their customers' store image. There has also been interest in using multi-attribute models instead of the semantic differential approach to measuring store image. This paper reports on the usefulness of the multiattribute approach in assessing possible differences between the customer perceived store image and management's self perceived store image.

Introduction

A review of retail image literature would lead one to a series of important conclusions. First, store image is an extremely complex phenomenon (Martineau, 1969; Boulding, 1956 and Arons, 1961); second, it consists of tangible and non-tangible factors (Kunkel and Berry, 1968 and Wyckham, 1969); and third, the image of a store is a function of attitudes held toward various image dimensions or store attributes (Alpert, 1971).

Image researchers should therefore strive to identify those store attributes which compose the image. Most importantly, an attempt must be made to isolate attributes which are more critical in the formulation of the total image. These are the store image attributes which most heavily influence store choice (Alpert, 1971).

The most extensively used technique for measuring store image is the semantic differential. This technique is easy to apply, is reliable, is simple in that it eliminates problems such as ambiguity which is inherent in question phrasing (Mindak, 1961). Despite its popularity, the semantic differential has one key shortcoming. It does not isolate those dimensions which store customers may hold salient (James, Durand and Dreves, 1976 and Marks, 1976). Therefore, the approach does not allow a weighting of responses according to their relevance for the customer (Doyle and Fenwick, 1974-1975).

In addition to heavily reliance on the semantic differential, the state of art in store image measurement is now going beyond customer-only store image. One of the most significant recent contributions of image studies lies in attempts to contrast the management and consumer store image (Crissy, Pathak, and Sweitzer, 1974-1975; McClure and Ryans, 1978; Doyle and Sharma, 1977 and May, 1972). Significant discrepancies or conflicts between the image perceived by the management versus customers suggest vulnerable aspects of a retail business. If these weak areas can be ranked according to their severity, then management may have a clear-cut picture of its business' effectiveness in catering to its market segment(s).

This paper is based on a study which tried to accomplish two key objectives: First, to identify congruence or conflict between management and customer store images and second, to determine the relative importance of

store image components from both a management and a customer point of view and therefore determine the relative seriousness of management-consumer discrepancies.

Methodology

A multiattribute model was utilized in this study. The major advantage of this technique is that it accounts for store image attributes to be differently weighted. A revised Fishbein model is one of the most popular multiattribute models as indicated by its appearance in the consumer behavior literature. This revision is also termed the "adequacy-importance" model (Cohen, Fishbein and Ahtola, 1972). It is algebraically expressed as follows:

$$A_o = \sum_{i=1}^n P_i D_i \quad (1)$$

where  $A_o$  = an individual's attitude toward object;

$P_i$  = importance of attribute  $i$  for the individual;

$D_i$  = the individual's evaluation of object with respect to the attribute  $i$ ;

$n$  = number of attributes.

It has been concluded that the adequacy importance model may predict consumer attitudes accurately and therefore be most useful for developing attitude change strategies (Mazis and Ahtola, 1975).

The retail store selected for the study was a gift shop located in the central business district of a small university town in Southwest Virginia. Data were gathered by systematically handing out questionnaires to shoppers after they had made a purchase in the gift shop and were preparing to leave the store. Respondents returned questionnaires by mail. Out of one hundred questionnaires distributed, seventy were returned. Three employees and one owner/manager also completed the questionnaire<sup>1</sup>. Since respondents had just completed a purchasing act in the store, it was felt that they could easily evaluate the store's attributes with valid perceptions.

The questionnaire was composed of four parts. It included: (a) demographic information, (b) a measure of store attribute importance (salience), (c) a measure of store performance of those attributes (valence), and (d) a measure of the shopper's attitude toward shopping. General classes of store attributes which were investigated included: general characteristics, product selection, price ranges, personnel,

<sup>1</sup>These four people are considered "management" in this paper.



services, advertising, and physical characteristics. The questionnaire was designed so that specific image dimensions were intermixed with respect to general class.

Saliency (or attribute importance) was measured through a one-dimensional preference scale. Respondents were asked to rate the importance of forty-three store attributes when considering a gift shop (where 1 = most important and 5 = not important). Valence was measured by use of a semantic differential scale with seven intervals across all forty-three attributes. Polarity of the semantic differential phrases was randomized to avoid bias.

Scores for saliency and valence were first multiplied and then summed for each individual (to arrive at an overall attitude towards the store along its attributes and thus its store image). In order to make sure the expected contribution to attitude is equal to the actual contribution saliency and valence were compatibly scaled. Saliency components (given to respondents as 1 through 5) were scaled as +2, +1, -1, -2. Valence components ranging from "extremely" to "extremely" were scaled as +3, +2, +1, 0, -1, -2, -3. Thus, the bi-polarity pattern was assumed for both valence and saliency measures (Bonfield and Ryan, 1975).

#### Findings and Discussion

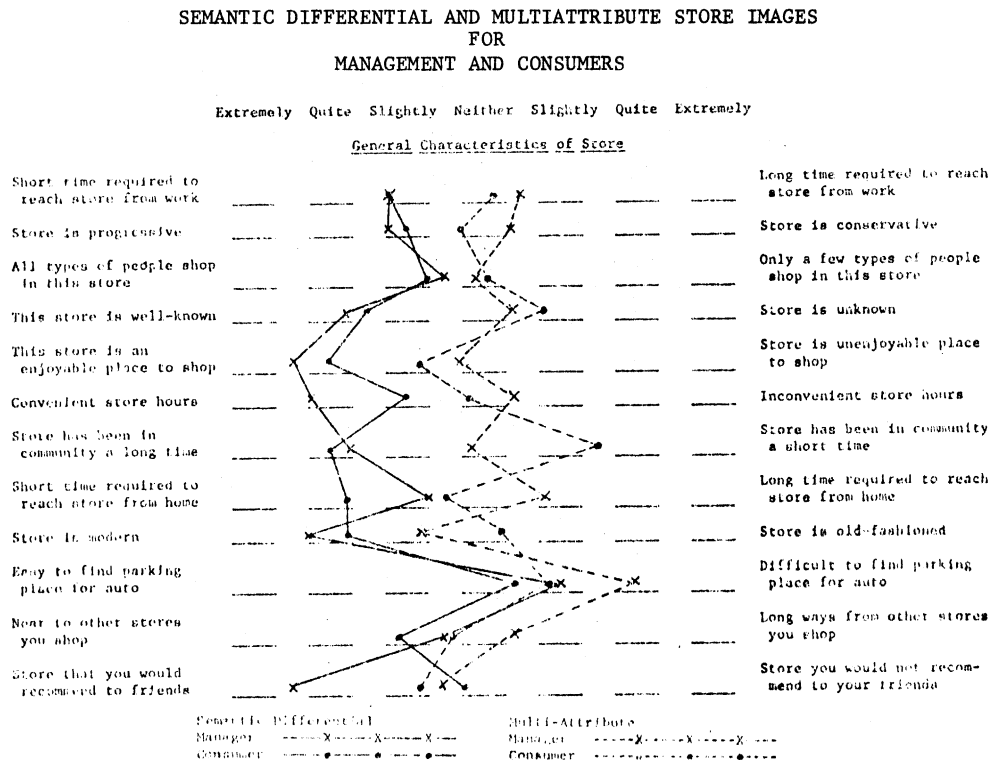
Figure 1 depicts the study's findings. Four sets of data presented in the figure: semantic differential measurement of image attributes for both management and store customers and multiattribute measurement of image for both groups. Some special strengths and weaknesses of the store were displayed by the semantic differential data for both customers and management.

Among the strengths are: enjoyable place to shop, has been in the community a long time, is modern, commands a reasonable degree of customer loyalty (depicted by the statement of "would recommend to friends"), interesting merchandise, good for gifts, freedom to "browse," fast checkout service, window displays, merchandise displays, location of merchandise in store, easy to move about, decor, and cleanliness. However, it is extremely important to note that in most of these cases, the management's perception of store attribute performance is considerably more favorable than customers' perception. This phenomenon has been previously documented (Downs and Flood, 1979). It is important to note that these discrepancies may lead to undesirable managerial action.

Again on the basis of semantic differential, weaknesses of the store seem to be: parking, value for money spent, markup level, special ordering of merchandise, telephone ordering, advertising frequency and advertising information. The latter two imply not advertising enough and not providing enough information in the ads.

Figure 1 also illustrates what happens to store image when saliency (attribute importance) is included (the multiattribute approach). First, the following attributes are considered relatively unimportant to the consumer: how long the store has been in the community, how modern the store is, window displays and merchandise displays. Thus, an advertisement stressing "we have been serving this community for forty years" is likely to be ineffective in increasing store shopping. Again, of the weaknesses pinpointed by the semantic differential alone, only two appeared to remain serious weaknesses when saliency is added: value for money spent and size of markup. On the other hand, new weakness, prices in relation to compe-

FIGURE 1





tition, emerged as a result of multiattribute analysis.

FIGURE 1 (CONTINUED)  
 SEMANTIC DIFFERENTIAL AND MULTIATTRIBUTE STORE IMAGES  
 FOR  
 MANAGEMENT AND CONSUMERS

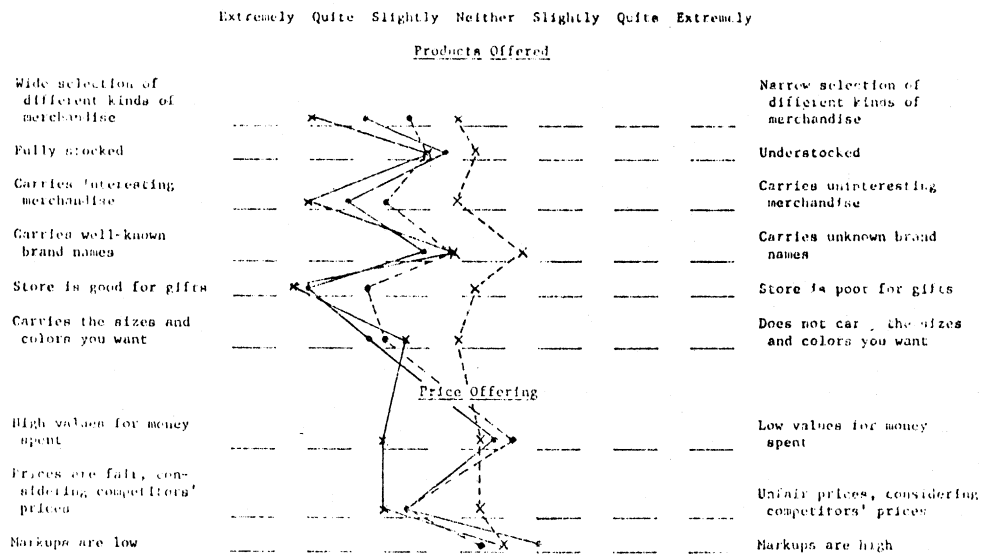


FIGURE 1 (CONTINUED)

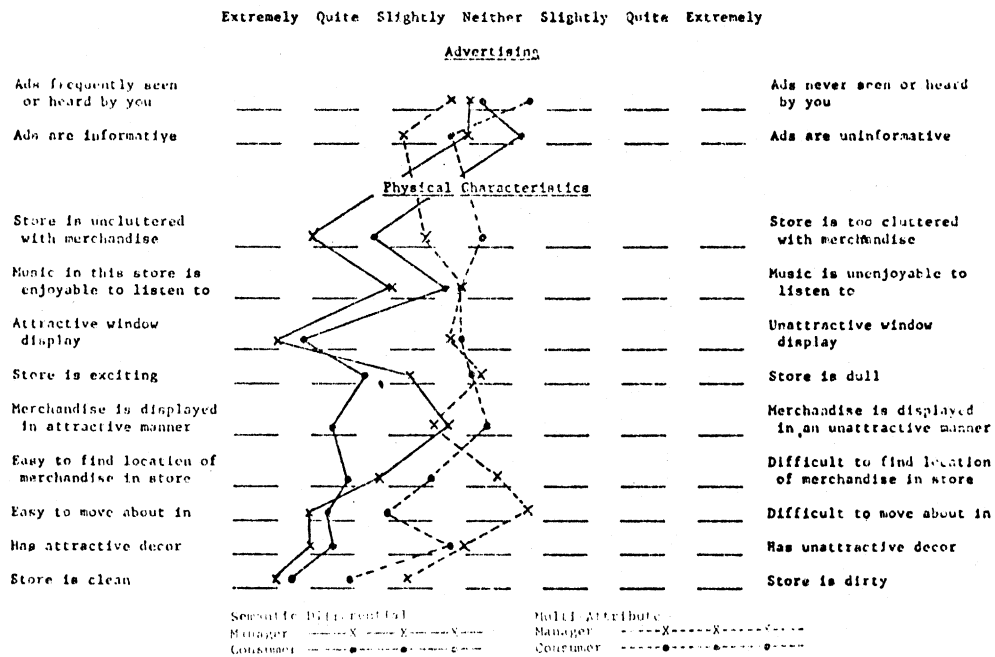
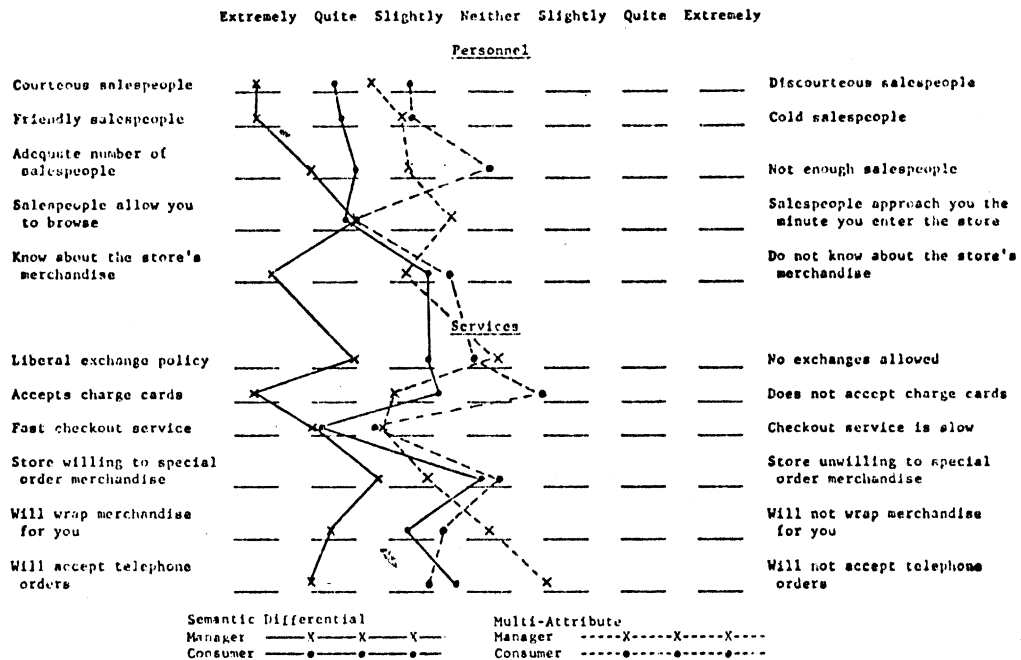


FIGURE 1 (CONTINUED)



One of the most significant contributions of salience scores is to reduce the degree of favorability in management's store image. According to valence ratings, twenty-nine of the forty-three attributes were overrated (compared to customers). The number of over-rated attributes goes down to sixteen when salience is included.

If used for diagnostic purposes, the multiattribute data indicate that there are some twelve problem areas as reported in Table 1. Problems stem from the discrepancy between management's perception and the customer's perception of certain attributes expressed as the product of salience and valence. Of the key problem areas, four are especially important from the consumer's point of view. First, unlike management, consumers do not think that parking is very bad. Third, and again unlike management, consumers think that their ability to charge purchases is rather poor. Fourth, in consumers' opinion, the number of sales people available is much worse than what management thinks.

These gaps between management and customer perception could cause a number of serious problems. For instance, management's perception of the availability of gifts and size and color selection is much more pessimistic than that of the consumers. Similarly, management has a more pessimistic view of parking facilities and store layout. It can be speculated that given the option, management might try to change store layout first instead of adding more sales people or improving the existing credit system. It can be seen from Table 1 that this is likely to be an unfortunate move in terms of utilizing the store resources and enhancing its marketing effectiveness through increased favorability of customer store image.

#### A Diagnostic Sequence

The key to the diagnosis in this paper is the discrepancy between the management's and customers' store image. If management can accurately measure store image, it can easily diagnose some of the most important problem areas. It must be reiterated that the basic objective here is twofold: first, the two images should be as close to each other as possible; and secondly, both of the images must be on the positive side as depicted in Figure 1. Once the critical gaps between the two images have been pinpointed, management's major marketing tasks are to be in the direction of narrowing and eventually eliminating these gaps.

If there are multiple gaps, then management has to decide which one(s) would be most important to take care of first. Management should prioritize the gaps according to their store attribute importance and according to their relative relationship to the store's profits. Corrective measure should be established on the basis of those priorities. For example, management might realize that store decor creates another gap. Management will have to realize that if it does not have the proper merchandise mix (no matter how adequate the decor might be), the store is unlikely to be very profitable.

After management takes corrective action on as many gaps that it could possibly take care of given the firm's financial resources, time and know-how, an attempt should be made to reassess consumer and management store images. This assessment process is then used as feedback for management to reorient its marketing activities towards further refinement of both images. This store image action process is depicted in Figure 2.

TABLE 1

SPECIAL PROBLEM AREAS DEPICTED BY  
THE MULTIATTRIBUTE MODEL\*

	<u>Management</u>	<u>Consumers</u>
How long the store has been in the community	.1	-1.5
How modern the store is	.8	-.2
Availability of parking space	-2.0	-.9
Availability of gifts in the store	.1	1.5
Has sizes and colors you want	.3	1.3
Fair prices in relation to competition	.0	1.0
Number of salespeople available	1.0	.0
Freedom to "browse" in store	.5	1.7
Ability to charge purchases	1.2	-.7
How easy it is to move about in the store	-.5	1.3
Accepts credit cards	1.4	-.8
Accepts telephone orders	-.5	.6

\*Combined average of multiattribute scores depicting the product of salience and valence characteristics of each attribute. Minus scores indicate negativness of the attribute, whereas zero means neutral. Scores range from +3 to -3.

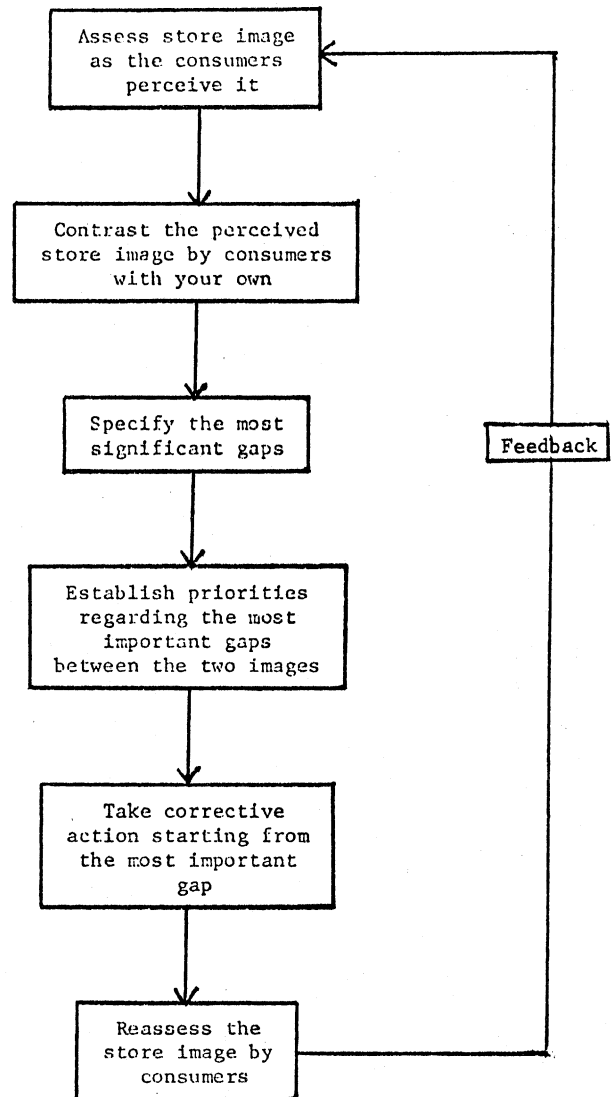
### Conclusions

From the above research findings, it can be concluded that management's and the consumer's store image are not likely to be perfectly congruent. The greater this discrepancy, the more serious are the management's problems. A diagnostic tool must be utilized to measure the discrepancy. Multiattribute models are effective in depicting the problem areas, because they utilize both salience and valence of image attributes.

Since management's resources are limited, they should not be put to use on store attributes not considered important by consumers. This would result in sub-optimization of the store image decision area. The store would not be able to take advantage of market opportunities nor would it be able to establish its competitive advantage by segmenting the market efficiently. Instead, it might emphasize factors which are deemed important by management, but unimportant by the consumers, or vice versa.

Figure 2

THE UTILIZATION OF DIAGNOSIS



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EXAMINING SOCIAL SETTING AND PRODUCT REFERENCE VIA CONJOINT ANALYSIS  
AN EMPIRICAL STUDY OF RESTAURANT PATRONAGE

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Abstract

This paper employs the conjoint measurement methodology to examine the impact of social setting on preferences for restaurants. It is shown that those who go to restaurants with friends differ from those who go with family in terms of importance attached to different restaurant attributes and demographic characteristics. Some managerial implications of the study are discussed.

Introduction

"Marketing could be defined as the study and employment of social influence processes by the marketer in order to satisfy the consumer's needs at profit" (Zaltman and Wallendorf, 1979, p. 200). While some critics may disagree with this definition, few would deny the influence of social processes and settings on the formation of consumer preferences and decision making. In fact, most modern consumer behavior texts devote substantial space to emphasize the role and importance of social groups and family in understanding consumer choice behavior (Berkman and Gilson, 1978; Engel, Blackwell and Kollat, 1978; Loudon and Della Bitta, 1979); Schiffman and Kanuk, 1978; Walters, 1978; Zaltman and Wallendorf, 1979). Consistent with this perspective is an emerging stream of research on consumer socialization (Churchill and Moschis, 1979; Moore and Stephens, 1975; Moschis and Churchill, 1978, 1979; Moschis and Moore, 1978; Ward, Wackman, and Wartella, 1977). A common thread observed in this piece of literature has been the need to undertake further empirical research to examine the impact of social factors on consumer decision making (Moschis and Moore, 1979).

In keeping with this exhortation, this paper attempts to examine the impact of social setting in preferences for restaurants. Two different social settings or scenarios are considered: eating with friends or eating with family. Conjoint measurement methodology is used to measure the utilities of the attributes from preference data. While this technique has been widely used in marketing (Green and Srinivasan, 1978), its use to examine the influence of social factors on consumer choice behavior has been limited (Wind, 1976). The design, analysis and results of the empirical study conducted are described in the following sections.

Research Design

The first step in the research design process was to identify the salient attributes of restaurants. As noted by Wilkie and Pessemlier (1973), an entirely satisfactory method for attribute generation and selection has not yet been developed. A particularly attractive approach to attribute identification is Kelley's repertory grid (Kelley 1955). Hence this procedure was adopted. In a pretest, respondents were presented with triplets of restaurants. Each respondent was asked to think of a dimension along which any two of the three restaurants were similar to each other and different from the third. This process was

continued with new triplets of restaurants until the respondent had exhausted his repertoire of alternative bases for differentiation. The respondent was also required to provide the relative salience of each attribute he/she had identified. On the basis of the frequency of attribute mentions, and the average importance ratings, five attributes were selected. Furthermore, two of these attributes were conceptualized in terms of four levels each while each of the remaining attributes was defined in terms of two levels. The levels of attributes were selected so as to reflect the variety of restaurants available in the local area. The attributes identified and the corresponding levels are indicated in Table 1. These attributes relate to the type of restaurant, price of meal, level of service, entertainment and acceptance of major credit cards.

TABLE 1  
LIST OF ATTRIBUTES AND THEIR LEVELS

Attributes	Level
Type of Restaurant	1. BBQ
	2. Steak
	3. Mexican
	4. Chinese
Price of Meal	1. 2.75
	2. 4.00
	3. 5.25
	4. 6.50
Service	1. Table
	2. Buffet
Entertainment	1. Yes
	2. No
Credit Card	1. Accepted
	2. Not Accepted

The next step was to generate hypothetical profiles (Green and Srinivasan 1978) of restaurants using the attributes and levels identified. From Table 1 it can be seen that for a completely crossed design  $4 \times 4 \times 2 \times 2 \times 2 = 128$  different profiles will be needed. Having the respondents evaluate these many profiles is clearly not a feasible task (Green and Srinivasan 1978). Hence, it was necessary to reduce the number of profiles to a manageable subset. For this purpose, a special type of design called an orthogonal array was employed (Green 1974a, 1974b). The use of an appropriate orthogonal array resulted in the selection of 16 profiles. Each of these profiles was described on a separate index card. An example of one such profile is shown in Figure 1.

Data Collection

The data for this study was obtained by personal interviews with male and female members of households in a major metropolitan area in the U.S. The interviewers were asked to survey every third house in randomly

chosen blocks. A total of 314 useable questionnaires were obtained.

FIGURE 1  
AN EXAMPLE OF A TYPICAL RESTAURANT PROFILE

A primarily Chinese restaurant, with service at your table and featuring live entertainment. All major credit cards are accepted. A typical meal costs \$6.50 per person.

During the course of the interview, each respondent was presented with the 16 profiles of restaurants. He/she was asked to rank these profiles in terms of his/her preference to patronize the restaurants described by the profiles for dinner. Furthermore, the respondent was asked to indicate the social setting under which he/she generally made visits to the restaurants in the local area. The social setting was to be described in terms of whether the visits to the restaurants were made generally alone, with family or with friends. Finally, data pertaining to standard demographic characteristics were obtained.

#### Data Analysis

A flow chart of the data analysis strategy adopted is given in Figure 2. The individual level preference rankings were analyzed via MONANOVA (Kruskal, 1965) to develop part worth function associated with each attribute by each respondent. By comparing the relative ranges of part worth utilities across attributes for each respondent, the importance weights attached to the different attributes by the individual were determined (Jain et al., 1979). Based on the social setting, the respondents were classified into three groups: eat alone, eat with friends and eat with family. As there were only 8 respondents who ate alone, this group was not considered in further analysis. Two group discriminant analyses and t-tests were conducted to determine which restaurant attributes and demographic characteristics distinguished between the two groups.

#### Results

The relative importance attached to the different attributes by those who patronize restaurants mainly with friends and by those who eat out generally with their family is indicated in Table 2. It can be seen that those who visit restaurants with friends regard type of restaurant, price and service as the more important factors influencing their choice. Of these, the type of restaurant is considered as the most important factor. Price and service are next in order, both being considered equally important. While those who visit restaurants with their family consider only the type of restaurant and price as being the more important factors in their choice of restaurants and unlike their counterparts do not consider service to be relatively important. This group also considers type of restaurant to be the most important. In fact, far more than those who eat with friends. The availability of entertainment and credit card policies are considered to be relatively unimportant by both the groups.

TABLE 2  
RELATIVE IMPORTANCE OF ATTITUDES

Attribute	Group	
	Eat with Friends	Eat with Family
Type of Restaurants	0.42	0.56
Price	0.26	0.32
Service	0.27	0.06
Entertainment	0.03	0.06
Credit Card Policy	0.02	0.00

Although the two groups do not significantly differ in terms of relative importance accorded to price and type of restaurant, there may be differences in their respective part-worth utilities. The respective part-worth utilities are given in Table 3. From the table it can be seen that only the part worth utilities of price are significantly different across the two groups. The similarities and differences between the two groups with respect to price can be observed by examining the part-utilities plotted in Figure 3.

Over the range of prices both the groups show preference for restaurants where a typical meal costs more. That is, both the groups are displaying a price-perceived quality effect. Such price-perceived quality relationships have been observed in several studies. An excellent review in this topic is provided by Olson (1977). However, those who visit restaurants with their families have a much greater preference for a medium price (\$5.25) meal than those who visit with their friends.

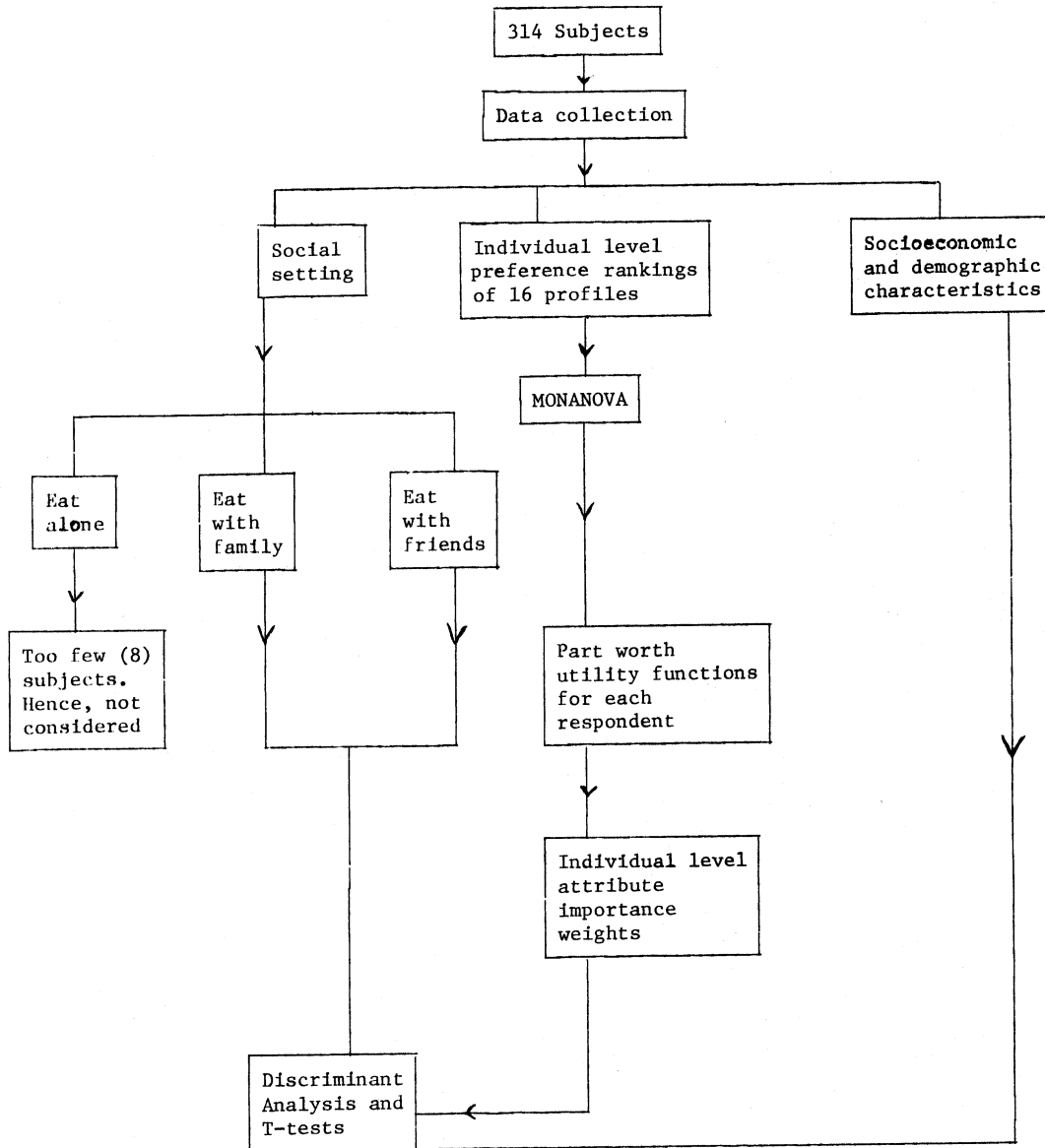
TABLE 3  
PART-WORTH UTILITIES FOR PRICE AND TYPE OF RESTAURANT

Attributes	Group	
	Eat with Friends	Eat with Family
Price:		
\$2.75	-.326	-.358
\$4.00*	-.186	-.380
\$5.25	-.015	.251
\$6.50	.527	.487
Restaurant		
BBQ	-.114	-.187
Steak	-.553	-.691
Mexican	-.135	.038
Chinese	.802	.844

\* p < .05

The salient demographic characteristics of the two groups are given in Table 4. It can be seen that those who go to restaurants primarily with family are married, older, have more children and greater income. On the other hand, those who eat primarily with friends are younger, single, if married have no children, and have less income.

FIGURE 2  
A FLOW CHART OF DATA ANALYSIS STRATEGY



#### Discussion

The results of this study have certain implications for the marketing manager. Since respondents who go to restaurants with family differ from those who go with friends, the social setting of the respondents could be a meaningful way of segmenting the market for restaurants.

Those who eat with family are more sensitive to the type of restaurant as compared to those who eat with friends. However, this factor is the most important to both the groups. Since the type of restaurant was defined as BBQ, Steak, Mexican or Chinese, it is important for the restaurant management to emphasize a certain definite image.

Also, it was found that different levels of service and price have different utilities for the two groups. Hence it is important that a restaurant has a wide variety of menu at different prices in order to attract a large percentage of the market.

In conclusion, it must be pointed out that this study was of an exploratory nature and is not without limitations. The social setting was conceptualized in limited terms. Other aspects and dimensions of the social setting need to be explored. Even though the attributes were chosen using the repertory grid, we cannot be certain that these attributes are indeed representative. Also, it must be pointed out that an additive main effects model was employed to estimate part worth utilities via conjoint measurement. While the use of main effects models in conjoint analysis is more or less the norm (Green and Srinivasan, 1978), consideration must be given to the various interactions while estimating consumer preference functions. However, it is hoped that this study was useful in addressing an important area in consumer behavior and in illustrating the application of conjoint measurement to assess the impact of social setting on preference formation.



FIGURE 3  
UTILITIES FOR DIFFERENT LEVELS OF PRICE

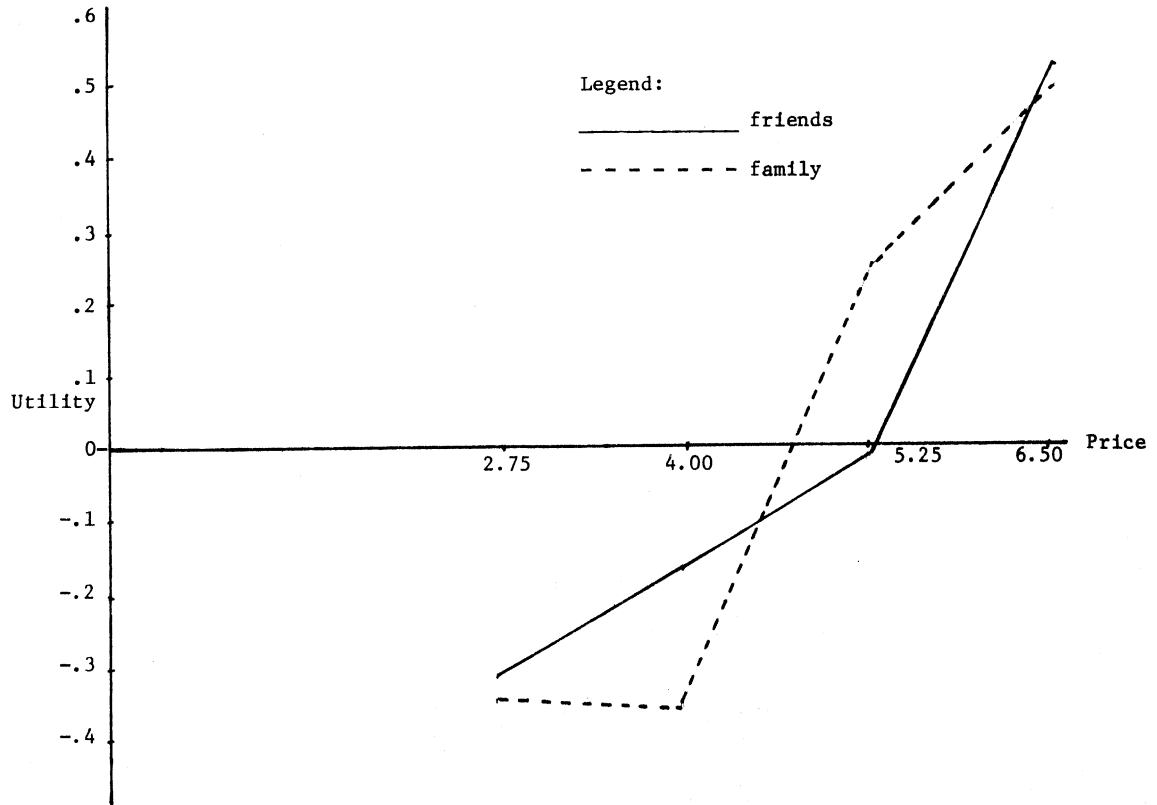


TABLE 4  
DEMOGRAPHIC PROFILE OF THE TWO RESPONDENT GROUPS

Demographic Characteristic	Group	
	Eat with Friends	Eat with Family
Married	31.3	68.7
Not Married	94.4	5.6
No Children	73.2	26.8
With Children	30.9	69.1
Age 18 - 24	83.2	16.8
Age 25 - 35	61.0	39.0
Age 36 - 45	21.0	79.0
Age > 45	54.3	45.7
Income < \$6,000	94.6	5.4
Income \$6,000 - \$14,999	71.3	28.7
Income > \$15,000	44.0	56.0

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A PRELIMINARY INVESTIGATION OF PERCEIVED RISK DIFFERENCES  
IN THE FIRST ORDER AND SECOND ORDER RETAIL MARKETS

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Abstract

The second order (previously owned merchandise) retail market is receiving increased attention from consumers. This study compared the perceived risk in the retailing of new versus used merchandise and the applicability of the traditional risk reduction strategies to the second order markets. Differences were found between risk perception of new versus used merchandise. However, the importance of various information sources to reduce risk did not differ by type of merchandise. Strategy implications for second order merchants are derived.

Introduction

Researchers in retailing have traditionally concentrated on purchasers of new merchandise (i.e., first order retail goods). As a result, there is a body of literature concerning first order markets. However, there is a lack of information on used merchandise purchasers or retailers (i.e., second order goods) (Dovell and Healy, 1977; Riecken, Yavas and Battle, 1979; Yavas and Riecken, in press). Yet current economic conditions combined with new social orientations appear to make second order market buying an important retailing phenomenon.

The proliferation of institutions selling second order goods as well as the record sales levels of some second order retailers (Dovell and Healy, 1977) show the increased interest in second order goods. The popularity of garage sales and auctions are well documented in most local newspapers. Although the volume in the second order market is not as large as the first order market, it is substantial and growing. Therefore, it is necessary to investigate this segment to see if second order customers behave in the same manner as first order customers.

Previous studies indicate that buying motives for used merchandise shoppers tend to center around price and quality (Gatlin, 1980; Riecken, Yavas and Battle, 1979), although this may be modified by the amount of shopping done. One study found that light and medium shoppers of a used merchandise outlet were more concerned with "adventure" in shopping than were heavy users of the outlet (Yavas and Riecken, in press). Patronage motives of shoppers of informal second order retail outlets center around price, type of good, adventure, and location (Dovell and Healy, 1977). Garage sale shoppers were found to be unwilling to travel very far or to spend much time shopping (Dovell and Healy, 1977).

Typical patrons of second order retail outlets may be described as "bargain hunters" in that they overwhelmingly view used merchandise as representing good value (Riecken, Yavas and Battle, 1979; Yavas and Riecken, in press) and are very price sensitive (Dovell and Healy, 1977; Riecken, Yavas and Battle, 1979; Yavas and Riecken, in press). Over three-quarters of the garage sale shoppers indicated that they tried to negotiate price at least some of the time, and over one-third stated that they attempted to obtain a 50 percent reduction in price (Dovell and Healy, 1977).

Overall, the patronage motives and shopping behavior of second order merchandise buyers seem to differ very little from those of the traditional retail customer (Bearden, 1977; Brunner and Mason, 1968; Cox and Cook, 1970). Price, quality, and location are important to both markets. The importance of price and bargaining to second order shoppers suggests that they may view haggling and low price as a means of reducing perceived risk in their buying.

Almost two decades ago, Bauer (1967) asserted that "consumer behavior involves risk in the sense that any action of a consumer will produce consequences which he cannot anticipate with anything approximating certainty." The consequences may be psychological, physical, functional, financial, or social (Cox, 1967). To cope with the hazards of buying, consumers tend to develop risk reduction strategies. These strategies enable the consumers to act with increased confidence in their purchase decisions. A commonly employed risk reduction strategy involves seeking additional information from a number of sources (Bauer, 1967; Cox, 1967; Lutz and Reilly, 1973).

Purpose of Study

Although there is a plethora of articles investigating both the relative usefulness of various information sources in reducing perceived risk and the variation of risk across product categories, the topics researched have yet to be applied to used merchandise buying (Bauer, 1967; Bearden, 1977; Cox, 1967; Jacoby and Kaplan, 1972). Thus, the purposes of this study are two-fold: (1) to compare perception of risk between selected new and used products and (2) to determine if consumers differ in their evaluations of information sources to aid risk reduction for new versus used merchandise.

A better understanding of consumers' risk perception and information seeking behavior concerning used merchandise vis-a-vis new merchandise may be helpful to retailers serving the second order retail markets. The results, for instance, may suggest specific strategies that a retailer can follow in inducing consumers to reduce perceived risk.

Methodology

The data for the study were collected as part of a larger study through self-administered questionnaires from a sample of 178 undergraduate students in a mid-western community. With the thrust of the study being to explore the existence of relationships rather than to generalize to a universe, a student sample was satisfactory (Morgan, 1979).

A pilot study was undertaken to obtain a representative list of used products that were purchased by students. A group of subjects who would not participate in the primary survey were asked to list the products that they had considered buying or had bought secondhand during their college years. Books were eliminated

because of college students' common practice of purchasing secondhand books. The grouping of individual products (e.g., chairs, tables) into broader categories, enabled the derivation of the following product groups (1) bikes, (2) furniture, (3) stereo sets, (4) appliances, and (5) sporting equipment.

#### Measurement of Risk

Cox and Rich (1964), considering Cox's original conceptualization, state that the two components of perceived risk are uncertainty and fear of the consequences with a purchase. The types of risk, refined by Jacoby and Kaplan (1972) and Roselius (1971), include money, time, ego, and hazard loss. Each type of risk was defined (see Exhibit 1), and respondents were asked to indicate on a seven-point scale (7 equals very important to 1 equals not important at all) how important each type of risk was to them in buying both new and used versions of the products included in the sur-

#### EXHIBIT 1

#### COMPONENT OF TOTAL RISK<sup>a</sup>

Ego Risk:	Sometimes when we buy a product that turns out to be defective, we feel foolish, or other people make us feel foolish.
Hazard Risk:	Some products are dangerous to our health or safety when they fail.
Time Risk:	When some products fail we waste time, convenience, or effort getting it adjusted, repaired, or replaced.
Money Risk:	When some products fail, our loss is the money loss it takes to make the product work properly, or to replace it with a satisfactory product.

<sup>a</sup>Source: Bauer, Raymond A. "Consumer Behavior as Risk Taking," Proceedings American Marketing Association, 1960. D. F. Cox, ed., Risk Taking and Information Handling in Consumer Behavior Boston: Harvard University, 1967.

vey (Jacoby and Kaplan, 1972; Roselius, 1971). To measure the uncertainty component, respondents were asked to indicate on a five-point scale (5 equals very probable to 1 equals very improbable) the likelihood that each type of risk would occur as a result of buying these products (Jacoby and Kaplan, 1972; Roselius, 1971). Consequence and uncertainty components were combined multiplicatively so that a respondent's risk score on each type of risk could range between 1 and 35. An overall risk score was derived by summing the four risk scores; thus, the procedure was repeated for both new and used versions of each product category.

To operationalize high risk perceivers for the new and used versions of each product, respondents were ranked based on their overall risk scores. Those whose overall risk scores were in the top twenty-five percent (first quartile) were called high risk perceivers.

#### Operationalizing Information Sources and Risk Reduction

Consumers engage in information search activities to facilitate their decisions concerning some goal-object in the marketplace (Bauer, 1967). The search activity becomes especially significant if the consumers

perceive high risk in regard to the goal-object. Under such circumstances, consumers consult several sources to reduce the risk to a tolerable level. The information sources identified in the literature can be classified into three broad categories: (1) market dominated sources, e.g., advertising; (2) consumer dominated sources, e.g., word-of-mouth; and (3) neutral sources, e.g., consumer reports (Zikmund and Scott, 1973). To determine if the level of importance attached to the information sources was related to risk perception, respondents were asked how important (5 equals very important to 1 equals not important) they viewed seven information sources which were relative to purchasing the products under consideration. This was repeated for new and used versions of each product.

#### Findings

#### Overall Risk Differences

**Table 1** shows the overall mean perceived risk scores for the new and used products for each product category. **Table 1** shows that the highest mean risk score in the

TABLE 1

#### OVERALL MEAN PERCEIVED RISK INDEX SCORES: T-TEST RESULTS<sup>b</sup>

	New	Used	t
Bikes	59.46	71.84	5.01 <sup>a</sup>
Furniture	52.51	61.69	-4.09 <sup>a</sup>
Stereo Set	60.45	70.51	4.10 <sup>a</sup>
Appliances	59.40	76.02	6.87 <sup>a</sup>
Sport Equipment	54.40	64.37	4.37 <sup>a</sup>

<sup>a</sup>P < .0001

<sup>b</sup>Mean scores reported in the table can range between 4 and 140. The lower the score is the lower the level of perceived risk.

case of used products was a relation to appliances, followed by bikes and stereo sets. In the case of new products, consumers perceived the highest risk relative to stereo sets and the lowest risk relative to furniture. The data further show the overall mean risk scores for used merchandise were consistently higher than the scores for new goods in the same product category. The differences in each case were statistically significant (P < .0001) as confirmed by the t-test results. Therefore, it can be concluded that the levels of perceived risk associated with new and used merchandise are not the same. Used merchandise is perceived as more risky to purchase than new merchandise.

#### Risk Differences by Type of Risk

To determine if the overall risk differences could be attributable to some or all of the four risk types previously defined, a further exploration of differences was undertaken by comparing mean risk scores under each type of risk for new and used versions of each product. **Table 2** summarizes the results of this analysis. It appears that time risk did not contribute to overall

TABLE 2

MEAN RISK SCORES FOR TYPES OF RISK: T-TEST RESULTS<sup>e</sup>

	Bikes			Furniture			Stereo Sets			Appliances			Sporting Equipment		
	New	Used	t	New	Used	t	New	Used	t	New	Used	t	New	Used	t
Time	14.48	16.65	2.53 <sup>b</sup>	14.01	15.17	-1.42 <sup>d</sup>	15.85	18.32	2.71 <sup>b</sup>	15.97	19.33	-3.75 <sup>a</sup>	13.06	13.86	1.05 <sup>d</sup>
Hazard	15.24	20.95	7.89 <sup>a</sup>	8.80	12.83	-7.69 <sup>a</sup>	11.64	12.82	2.06 <sup>c</sup>	14.00	20.15	8.45 <sup>a</sup>	13.68	18.14	6.08 <sup>a</sup>
Ego	13.02	13.45	.49 <sup>d</sup>	12.93	13.91	-1.16 <sup>d</sup>	15.36	16.42	1.10 <sup>d</sup>	12.11	14.32	2.66 <sup>b</sup>	11.83	13.44	2.23 <sup>c</sup>
Money	16.26	19.94	4.05 <sup>a</sup>	15.97	19.28	-3.71 <sup>a</sup>	17.25	22.45	5.66 <sup>a</sup>	16.84	21.94	-5.74 <sup>a</sup>	15.62	18.16	2.93 <sup>b</sup>

<sup>a</sup> P < .001<sup>b</sup> P < .01<sup>c</sup> P < .05<sup>d</sup> Not significant<sup>e</sup> Mean scores reported in the table can range between 1 and 35. The lower the score is the lower the level of perceived risk.

risk difference in the cases of furniture and sporting equipment. In other words, the consumer is not concerned with loss of time in repairing or replacing furniture or sporting equipment. However, it was significant for bikes and stereo sets at  $P < .01$  and appliances at  $P < .0001$ . Likewise, ego risk was not instrumental in the overall risk perception differences in relation to bikes, furniture, and stereo sets. Ego risk was significant only for appliances ( $P < .01$ ) and sporting equipment ( $P < .05$ ).

Based on the levels of statistical significance reported in Table 2, one can infer that the two types of risk which contribute most to overall risk differences concerning each product are money and hazard. The higher risk scores for used products again suggest that they are perceived more risky than their new counterparts relative to each risk type.

#### Information Sources

An interesting pattern emerged when the high risk perceivers of new and used products were compared relative to the level of importance they attached to information sources. Cox (1967) claims that "the consumer will utilize information which is relevant to the type of problems confronting her; that is, information which promises to reduce the type of perceived risk." Furthermore, Zikmund and Scott (1973) suggest that risk reduction activities, such as information search, are associated with high risk perception. As shown in Table 3, high risk perceivers of used and new merchandise for each product category tended to treat information sources equally importantly except in two instances. The exceptions were in the category of appliances. The high risk perceivers of used appliances more than high risk perceivers of new appliances viewed friends' recommendations as important. The opposite was found to be true concerning a neutral purchasing information source (consumer reports).

#### Summary and Implications

The findings of the study suggest that risk perception does vary between used and new products. Consumers perceive more risk in the purchase of used products relative to new ones. The further analysis of data by risk types also shows, contrary to the Dovell and

Healy study (1977), financial (money) risk is not the only concern in the second order markets. Other risks, notably performance risk, are also of concern to consumers. Another conclusion stemming from the study is that people in the second order market are not significantly more influenced by information sources in reducing their risk. This means that second order retailers can follow the patterns of risk reduction strategies commonly used by first order retailers.

Until now, most second order retailers have relied on word-of-mouth in increasing their awareness among the general public (Sparks and Tucker, 1972). Although this strategy may be fruitful in reducing social (ego)

TABLE 3

#### A COMPARISON OF THE INFORMATION SOURCES USED BY HIGH-RISK PERCEIVERS IN PURCHASING NEW AND USED PRODUCTS: T-TEST RESULTS

Source	Product				
	Bikes	Furniture	Stereo Sets	Appliances	Sporting Equipment
TV Commercials	ns	ns	ns	ns	ns
Salesmen	ns	ns	ns	ns	ns
Newspaper Ads	ns	ns	ns	ns	ns
Magazine Ads	ns	ns	ns	ns	ns
Consumer Reports	ns	ns	ns	*	ns
Friends' Recommendations	ns	ns	ns	*	ns
Family Members' Recommendations	ns	ns	ns	ns	ns

ns: Not Significant

\*:  $P < .05$

risk perceived by consumers (Gatlin, 1980; Roselius, 1971), the results of this study show that reliance on mass media advertising should be helpful for second order retailers.

Within this context, several specific recommendations can be made to second order retailers located in college towns. Since perceived risk is higher for second order merchandise than for first order goods, second order retailers, in order to increase their sales volume, must actively try to reduce the perceived risk of their customers. It is apparent from the findings of this study that perceived risk is a factor in the consumers' buying decision for second order goods. Some of this concern may reflect the uncertainty associated with changes in previously learned buying patterns or is due to the lack of confidence in second order retailers.

Second order retailers must specifically try to reduce high levels of financial risk (money loss) and physical risk (hazard loss). Marketing strategies of these retailers must emphasize warranties, guarantees, safety inspections, etc., to minimize the idea that there may be money loss and hazard to their potential customers. Strategies with these specific emphases will tend to build consumer confidence and the retailer's image.

In conclusion it should be stated that inquiry into the second order market is in the embryonic stage. This exploratory study investigated the possible commonalities of perceived risk and the use of informational sources in the first order and second order markets. Like most exploratory studies, many questions arise which call for additional research in this area. However, before conclusions can be drawn, replication of the study is necessary. A study which includes an extension of perceived risk into other product categories of second order goods would be beneficial. Additionally, inquiry into the information processing techniques used by the purchasers of second order goods might provide additional insight into that market.

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## INDUSTRIAL CONSUMER BEHAVIOR: TOWARD AN IMPROVED MODEL

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### Abstract

This paper reports the findings of an extensive literature search and significant number of open ended interviews regarding how industrial equipment purchases are made. The authors find that a paradigm for the process can be constructed which will help researchers design empirical tests. The authors discuss key concepts of the interpersonal interactions which constitute industrial buying behavior. The process paradigm developed tends to confirm previous authors in that a two stage process seems to be quite general.

### Industrial Consumer Behavior: Toward An Improved Model

#### Introduction

In recent years, the field of organizational buying behavior has witnessed an impressive array of articles. It is our purpose to briefly review a representative body of the available literature and report our findings on an ongoing research project which deals with some specific issues. An initial model specification is provided together with guidelines for future research.

#### Literature Review

As Sheth (1977) has observed, contrary to popular belief, there are literally hundreds of studies dealing with various aspects of the organizational buying process. We plan to focus on some of the major articles of the past ten years which, we feel, represent conceptual or empirical advances in understanding this behavior. In order to perform the review, we have combined the conceptualization provided by Sheth (1977) and Webster and Wind (1972) to create a series of categories which represents the basic propositional structure. These include:

1. Environmental and organizational background factors
2. Buying center factors
  - a. Group and individual factors
  - b. Group and individual decision process
3. Overt behavior
  - a. Communication dynamics
  - b. Purchase dynamics

Each paper is categorized based on the particular aspect of the behavior it examines. In addition, we also examine some methodological issues including data collection methodology, respondents, sample sizes and analysis techniques and article focus. Table 1 gives an overview of the 21 papers included in the review. Of the 21, 10 are conceptual while 7 are strictly empirical. The remaining 4 are limited empirical with some conceptual ideas.

It seems that there is a degree of consensus about the important concepts. For example, roles of various individuals have been examined, search behavior has been explored and so have purchase patterns and source

loyalty. On the negative side, important concepts regarding the decision making unit have not been extensively investigated. In addition, important preconditions to decision making unit have not been explored. Such preconditions could include important triggering events and environmental factors which impact the organization buying process.

On another level of analysis, the overview suggest that there is some need to harden definitions of the major concepts. Precise and generalizable concept definitions are generally not available for concepts such as search, buying roles, and organizational environment variables. This lack of definition presents an opportunity for future significant research.

The major deficiency in the studies reported to date is a lack of substantial empirical testing of propositions. The sample sizes of most studies are quite small. Interviews often are obtained from purchasing agents who may not have a significant role in the decision making process (especially for large ticket items such as computer systems). While consumer (retail) data for frequently purchased goods are widely available and much sophisticated analysis has been performed to find key segments and variables affecting the purchase decisions, we are unaware of any comparable data bases in the organization buying context. Thus, a great opportunity exists for this type of research.

#### The Present Study

The present study is designed to fill some gaps found in the previous studies. Specifically the following areas are investigated:

1. What are the steps in the buying process? Are there any triggering events that start off the decision process?
2. What is the decision making unit (DMU) composition?
3. What is the role of the salesman in the buying process?

#### Methodology

In the present study, we examine the purchasing behavior as it related to office equipment. To accomplish our task, interviews were conducted with 18 sales representatives and 50 companies to gather information on the above research questions. The research is somewhat exploratory, but its overall direction is towards building a comprehensive model of buying process.

#### Interviews with Sales Representatives

Rationale. The rationale for conducting interviews with sales representatives was two-fold. First, sales representative interviews could provide a sufficiently detailed picture of decision making processes and could thereby serve as a basis for formulating a comprehensive interview guide for use in interviews with organizations. Second, interviews with sales representatives could provide insights as to inter-organiza-



TABLE 1  
OVERVIEW OF KEY ARTICLES

Reference	Givens		Buying Center		Behaviors		Focus		Methodology		
	Environment	Group	Individual Factors	Decision Process	Communication Dynamics	Communication Dynamics	Empirical	Conceptual	Mode of Data Collection	Response Technique	Sample Size
Cardozo & Cagley(71)			X	Supplier Choice	X	Supplier Choice	X		Lab Exp't	Industrial Purchasing	Simulation 64
Choffray & Lillien(78)		Buying Center		X		X			Mail Q'nair	Buyer	48
Gronhaug(76)	X	X	Buying Motives	Search					Lab Exp't	Buyer	77
Lambert et al(77)			Attitudes	Post-choice					Inter-view	Purch	14
Luffman(74)	X		Dissatisfaction	Search					Lit.	Engines	
Magee & Bean(76)			Role of Purch A						Review	Purch	300
Mathews et al(72)					Buyer/Seller Dyad				Lab Exp't	Students	Game
Myers & Lamm(76)			Attitudes								
O'Shaughnessy(77)			Perceptions						Previous		NA
Pettigrew(78)			Buying Rules	Resolve	Gatekeeper	X			Study Case		1 Firm
Scott & Wright(76)			Evaluation Criteria						Study		27
Sheth(73)			A Comprehensive Model	of Industrial Buyer Behavior					Sales Rep Q'nair	Purch	Engines
Webster(69)			New Prod Adoption								
Webster(70)			Opinion Leaders		Informal				Inter-view	Purch	58
Webster(78)			A Review of Models and Measurement	Technology							
Weigand(68)			An Overview of Factors	Affecting the Buying Function							
Wind & Robinson(68)			Discussion of Attempts	to Simulate the Buying Process							
Wind(70)			Source Loyalty						Case Study		1 Firm
Wind(71)			Buying Center						Inter-views	Buyers & Users	2 Firms
Wind(78)			A Review of Recent Developments								
Zaltman & Bonoma(77)			An Overview of Organizational Buyer Behavior								
			Total				13				10

tion differences (since sales personnel call upon many different organizations). Such information would then aid in the development of hypotheses.

While interviews with sales representatives have a number of virtues, we have been careful to observe a number of inherent limitations of such data. First, it is apparent that sales representatives do not have an opportunity to observe the entire decision process; much interaction between participants in decision making takes place when the sales representative is absent. In many instances, exclusion of the sales person is deliberate on the part of members of the customer organization. Thus, sales representatives are at best only able to provide a partial picture of the decision processes and decision determinants.

A second limitation on this data source is a function of the sales representative's vested interest and role in the decision process. Since sales personnel are expected to influence decisions, they may tend to attribute more influence to themselves than might actually be warranted.

Despite these limitations, sales representatives provide an unusual perspective and have unique knowledge concerning decision processes and for this reason interviews with such persons are incorporated within this work.

Respondent Sample. Given the hypothesis-seeking objectives of this activity, the sample of sales representatives was selected to provide diversity rather than generality.

As part of this investigation, interviews were carried out with 18 sales representatives in the mid-Atlantic section of the U.S., the sales people represented a number of different firms. The sample contained representatives who operated in urban as well as in suburban and rural environments.

#### Interview Content

Respondents were asked to describe three different customer organizations: 1) consumer groups having the "simplest" decision process, 2) those have the "most complicated" decision process and 3) those having a "typical" decision process. For the most part, decision complexity was defined by respondents in terms of organizational size; that is, the "most complicated" decision processes were found in larger organizations, while the simplest decision processes were associated with the smallest.

The results of these interviews were distilled and then used as input for developing a methodology to carry out subsequent interviews in consumers' organizations.

#### Interviews with Industrial Consumers

Rationale. Interviews were undertaken with industrial consumers to accomplish three major objectives. First, we wished to elaborate and refine our understanding of the decision making process beyond the preliminary knowledge gained through sales representative interviews. As part of this activity we wished to develop a more precise picture of decision steps and the roles of individuals who participated in the decision process.

A second objective of these interviews focused on the definition of key variables that need to be considered for predicting and forecasting equipment choice. Our concerns regarding key variables encompassed:

- 1) attributes of equipment

- 2) background and relative influence of decision participants
- 3) conditions inside and external to the organization itself.

Finally, a third objective of consumer-interviews was to aid in the development of methodology for:

- 1) gaining access to organizations for the purpose of interviewing multiple participants in decision making.
- 2) defining key parties in the decision process, and
- 3) pinpointing which equipment acquisition decisions would serve as a most useful focus for data-gathering.

Establishment Sample. A convenience sample of fifty organizations were encompassed in data collection and cut across a variety of industries. Data collection was primarily focused upon organizations in the mid-Atlantic region. The interviews were conducted personally by the authors and their colleagues.

Interview Content. Interview questions were open-ended in nature and interviewers were provided with an extensive array of probing items to refine information provided in response to open-ended questions. The interview guide examined a number of issues surrounding the organization, its decision making process and specific machine choices.

#### Findings

##### Group Structure and Decision Making

We find that Webster and Wind's (1972) notion of the decision making unit (DMU) is a useful heuristic for describing the group structure within which decision making takes place. For the purpose of this effort, the DMU may be defined as one to four persons who gather information and make buying decisions.

Within the DMU, there appear to be four distinct roles; individuals may, however, serve multiple roles. The roles include:

- 1) The signing authority - the person who must take ultimate financial responsibility for the decision, and who is the highest status member of the DMU (but not necessarily the most influential).
- 2) The proposal preparer - an individual who takes the responsibility for gathering information, for interfacing with potential suppliers and for pulling together technical and cost information in the form of an internal proposal for equipment acquisition.
- 3) The key influential - a person who is frequently superior to the proposal preparer in the organization, works closely with the proposal preparer in developing information and presenting it to top managers.
- 4) The key operator or key user - an individual who works directly with the equipment and who provides input to the proposal preparer concerning needs and requirements.

These roles appear to be relatively consistent across different organizations. In small organizations several or even all of these roles may be vested in a single individual.

One issue that became apparent through the interviews

was the fact that the structure and number of persons in the DMU is not strictly a function of organization size. In a large construction firm, for example, two individuals constituted the DMU for a 150-person organization. The Director of Personnel prepared the proposal and the Vice President for Project Management exerted signing authority.

Several additional key points might be made regarding the DMU and its functioning. First, it was fairly obvious from the interviews that some participants have greater influence over the decision than others. In general, it appears that the bulk of influence was attributable to the key influential and to the proposal preparer, who often stated that they equally shared influence over the decision (up to a shared total of 70 to 80 percent of control over the decision). The remaining influence was attributed to the signing authority.

A second point regarding DMU functioning relates to what Pettigrew (1975) has termed the gatekeeping function performed by DMU members. According to Pettigrew (who views organizational purchasing as a political process) the industrial buyer serves a gatekeeping role by filtering and translating information between suppliers and the organization. These gatekeeping functions are performed by both the key influential and the proposal preparer on multiple occasions during acquisition decisions.

Role of the sales representative. The foregoing discussion has been focused upon employees who participate in decision making. Individuals from outside of the organization may also impact upon decision making; of particular concern here, is the role of the sales representative.

At the outset of the project and early in the effort, we believed that sales representatives had considerable influence over the decision process and may actually serve as members of the DMU. Interviews with sales representatives, for example, suggested that sales persons in some instances may serve as consultants or ex-officio members of the DMU. Recognizing that information from sales representatives may be biased regarding the extent of their actual influence over the decision, information from interviews in customer establishments provides additional perspective on this issue.

It became clear in the course of interviews with DMU members that the role of sales representatives in the decision process was focused upon three activities:

- 1) stimulating or identifying needs
- 2) providing information
- 3) facilitating decisions

The role of sales representatives in stimulating or identifying needs was restricted to certain circumstances. That is, sales personnel were usually in a position to have such influence when they initiated the first contact. When the organization initiated contact with the sales personnel, needs had already been defined to some extent.

The role of sales personnel in providing information is almost universal. Thus, sales representatives work closely with the proposal preparer and provide information to support proposal development. Such information can be either technical or financial or both. DMU members were particularly dependent upon the sales representative for translating costs into terms they could understand. Thus, manufacturers create a condition that leads to dependency upon the sales represen-

tative, a dependency that makes sales personnel essential to the buying process.

While the sales representative may play these various roles or employ different strategies as a means of influencing decisions, members of the DMU made it quite clear that the sales representative is considered an "outsider." In short, the DMU members (particularly the proposal preparer) frequently exert a "gatekeeping" function (alluded to earlier) with respect to the sales representative. In particular, they minimize contacts that the sales representative has with higher level management, often precluding access to the signing authority within the DMU. Such gatekeeping practices may be used by DMU members for their own ends to increase the influence that they have over the decision (a similar point has been made by Zaltman & Bonoma, 1977).

Steps in the decision process. At project initiation we generated no explicit assumptions or hypotheses regarding the steps involved in the consumer choice process. However, it became evident during the literature review and throughout the interviews that developing an understanding of decision process steps was essential for further work on consumer choice.

Other researchers have also conceptualized the decision process in step-wise terms and a review of these concepts is in order to provide perspective for examining interview results.

Luffman (1974) for example, characterized the decision as consisting of three phases:

- 1) A qualifying phase - where a product need stimulates supplier search activity and preliminary evaluation of identified suppliers. The end result of this phase is a set of qualified suppliers.
- 2) A determining phase - where a specific quote is obtained from the sales representative. The end result of this activity is a more circumscribed list of suppliers and a set of attitudes (i.e., relative preferences) regarding those suppliers.
- 3) A confirmatory phase, where further evaluation of suppliers is undertaken on the basis of more specific criteria, and a buying decision is made.

Choffray & Lilien (1978) have recently developed a similar conception of the steps entailed in the buying decision. These authors point to three stages consisting of:

- 1) Elimination of supplier alternatives which do not meet organizational requirements.
- 2) Formation of decision participant's preferences, and
- 3) Formation of organizational preferences.

Hillier (1975) has taken the stage-dependent view of the decision process one step further, but focusing on

- 1) "precipitation" of the purchase (i.e., "triggering" conditions)
- 2) product specification
- 3) supplier offer and selection of the most suitable supplier, and
- 4) degree of satisfaction with the purchase and with the supplier.

Thus, Hillier encompasses post-decision consequences of a particular purchase decision within his framework.

Other investigators (cf. Lambert, Dornoff & Kernan, 1977) have also given attention to attitudinal consequences of specific purchase decisions within organizations.

Finally, we might focus attention upon the five-stage conceptualization of purchase decision making enunciated by Rewoldt, Scott & Warshaw (1969). The authors suggest that industrial buyer behavior may be viewed as a problem-solving process entailing:

- 1) recognition of a problem (i.e., a felt need)
- 2) search for alternative solutions
- 3) evaluation of alternatives
- 4) purchase decision, and
- 5) post-purchase evaluation of alternatives

There appear to be several common threads running through these differing conceptions of the steps in the buying process:

- . The decision process is iterative.
- . A central element of the decision process involves search and selection from among alternatives.
- . The ordering of steps in the process appears to be the same across conceptualizations.

It is clear, however, that researchers differ in terms of the beginning and end points of the decision process. Some authors begin with need recognition, others begin with eliminating inappropriate suppliers. Several authors terminate the buying process with a specific decision or with the formation of preferences; others focus on post-decisional consequences and post-choice dissonance.

#### The Industrial Buying Process

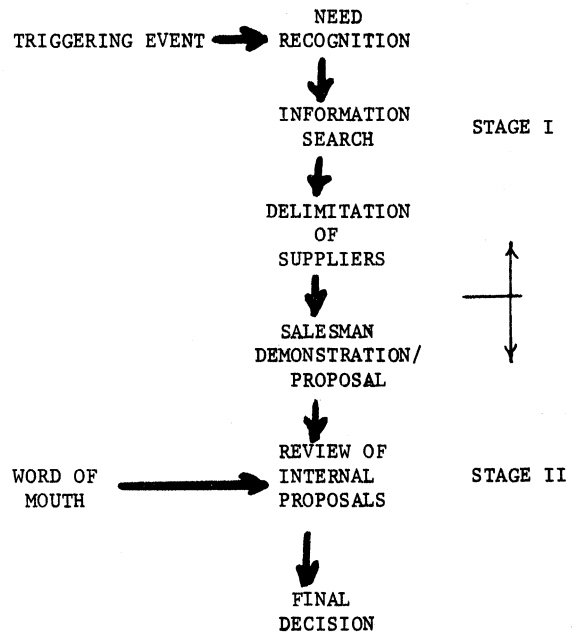
With this material as background, we analyzed the interviews and constructed a preliminary conceptualization of decision making employed in acquisition of industrial equipment. An overview of this preliminary conception is shown in Figure 1. This conceptualization assumes a continuous flow of actions from the search for suppliers, through machine need assessment, a demonstration and proposal on the part of the sales representatives, an internal review of proposals and a final decision. This view of the buying process reveals that there are two major stages in the process; a first stage that results in delimitation of feasible suppliers and a second stage involving detailed analysis of remaining suppliers and a final decision.

**Need Recognition.** At a particular point in time, it becomes clear to the DMU that there is a need for a new piece of equipment. This need could become apparent due to increasing production demands. Another major cause could be the failure of an existing piece of equipment due to excessive age or a work overload. In any event, a triggering event occurs which creates the perceived need.

**Information Search.** Members of the DMU begin collecting information from a number of sources including sales people, advertisements in mass media, word of mouth from associates, brochures and many others. With this information, the DMU begins to define the general character of the equipment configuration which they perceive to most closely meet their needs. They may decide, for example, that several small capacity machines are more appropriate than one large machine. The technical nature of the machines is decided with-

out reference to particular brands of machines.

FIGURE 1  
OVERVIEW OF THE PURCHASE DECISION STEPS



**Delimitation of Suppliers.** Once the technical nature of the machine(s) have been decided, the DMU determines which suppliers can provide the appropriate machines. In many cases, only one supplier is feasible. However, more frequently, several suppliers can provide the needed equipment. The budget constraints given by top management are also used in the evaluation.

**Sales Demonstration/Proposal.** Sales people from the feasible suppliers are asked to provide demonstrations of the equipment. The demonstrations show the DMU members the size, speed, complexity of operation and many other details. After such demonstrations, the sales people usually prepare a proposal including pricing plans and whatever technical and economic options which they feel are appropriate. These are converted into an internal proposal by the proposal preparer and are carefully reviewed by the DMU.

**Word of Mouth.** Current users of the various brands of the feasible machines are often contacted to obtain information. This information can often serve to eliminate a supplier. A common piece of information is the reliability of the machinery in question. If current users report unhappiness, the supplier is likely to be eliminated. Other information elicited includes ease of operation, staffing costs, supplies expense and other such information.

**Final Decision.** If more than one supplier is still feasible, the DMU discusses the options and chooses the brand of machine, the price option and other details within the decision complex. In general, the decision is by consensus. However, certain DMU members can carry higher decisions weight than others.

#### Conclusions

We have tried to highlight important trends and weaknesses in the current organizational buying literature. In addition, we have performed some initial explor-

tions involving structured discussions with decision makers. This activity has been directed at mounting an empirical test of the model posited here. The literature indicates such a test is warranted and should lead to new insight into multiple decision maker models.

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C.B.U. NEW NON-FOOD PRODUCT ADOPTION DECISIONS

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Abstract

This research supports the assumption that small, relatively unknown suppliers will have a difficult time introducing their new non-food products to the central buying units of major retail chains. C.B.U. adoption criteria and their relative importance are identified.

One of the most difficult tasks faced by the marketer is the introduction of a new product into a large chain retail organization. This is particularly true for the marketer who represents a smaller supplier and a supplier whose brand is not well known.

In the large chain retail organization, the major obstacle to new product penetration is provided by the screening performed by members of the central buying unit. These individuals monitor sales of current products handled by their company, delete products which are performing poorly, and consider a myriad of new products eagerly presented to them by enthusiastic suppliers and potential suppliers every year. Every decision to add a new product involves a number of elements for the buyer, including the risk of the new item selling weakly, and the difficult deletion decision which must be made to create space for the new item. Since most buyers are evaluated over the long run on the basis of the profitability of the products they are responsible for, there is tremendous inertia toward adoption of new products. Products already handled by the company are familiar and safe generators of sales and profits. New products are unfamiliar and unsafe; their ability to sell is unproved and they could become shelf-warmers. Thus the natural inclination of the buyer is to resist rocking the comfortable boat, and to avoid new products which may torpedo the boat.

How can the small, relatively unknown supplier penetrate such a formidable obstacle as the central buying unit (CBU) of a major retail chain organization?

Methodology

A literature search gave little comprehensive insight concerning the issue. No lists of potential decision criteria used in the non-food industry were found, although a study by Hileman and Rosenstein listed criteria used in the food industry [Hileman et.al.]

Our study identified the subjects to be examined as members of the C.B.U.s of large retail corporations operating in non-food areas. Examples would include Sears, Tandy Corporation, Woolworths, K-Mart, etc.

Decision criteria were identified through a number of extensive personal interviews with purchasing executives of Sears, Canadian Tire Corporation, the T. Eaton Co. Ltd. and Hudson's Bay Company. These interviews not only generated numerous decision criteria contain-

ing many items not mentioned in the literature, but also provided the authors with fairly detailed interpretations of specific factors. It should be noted that these interpretations frequently were different from the meaning of the criteria which had been mentioned in the literature.

A three page, self-administered questionnaire was developed and pretested through repeat personal interviews with the buying executives mentioned above.

A revised instrument was mailed to 359 principal buyers in 139 firms across Canada. These buyers were identified as follows: Non-food chain stores with five or more geographic locations were located using the Directory of Retail Chains in Canada. Each firm was contacted by mail and was asked to submit a list of its various buying categories or classes, each group of which was the responsibility of a principal buyer. Follow-up letters were used to ensure maximum participation. In the cases of the largest chains, this technique was supplemented by telephone calls and personal visits.

The research questionnaire was mailed to the 359 buyers thus identified in late August 1980 and was followed with a second wave mailed in late September. One hundred sixty-seven usable questionnaires were returned, providing a 46% rate of response.

A Profile of the Respondents

The type of non-food chains was quite varied, although more than 80% of respondents come from either department store, hardware, automotive, clothing, drug and shoe chain stores (see Table 1). Half of the respon-

TABLE 1  
TYPE OF CHAIN STORE

Type of Chain Store	Number of Buyer Respondents	Percent
Department Store	63	38.8
Hardware - Automotive	24	14.8
Clothing	17	10.5
Shoes	10	6.2
Furniture	1	.6
Stationery - Gifts	9	5.6
Jewellery	5	3.1
Drugs	15	9.3
Sporting Goods	3	1.9
Camera - Film	5	3.1
Electronics - Music	4	2.5
Lighting - Electrical	1	.6
Books	2	1.2
Arts and Crafts	2	1.2
Toys	1	.6
TOTAL	162	100.0%



dents had sales in excess of \$75 million (see [Table 2](#)).

TABLE 2  
SIZE OF FIRM

Gross Sales Revenue	Number of Buyer Respondents	Percent
Less than \$1 million	1	.7
\$1 million-\$4.9 million	17	11.3
\$5 million-\$9.9 million	8	5.3
\$10 million-\$24.9 million	15	9.9
\$25 million-\$49.9 million	18	11.9
\$50 million-\$74.9 million	17	11.3
\$75 million-\$99.9 million	6	4.0
More than \$100 million	69	45.6
TOTAL	151	100.0%

Although 20% of the respondents had greater than 20 years experience in the buying function, more than one quarter of the buyers had been buying for 5 years or less ([Table 3](#)). The number of new items adopted by an

TABLE 3  
TIME IN BUYING FUNCTION

Years Spent in Buying	Number of Buyer Respondents	Percent
5 years or less	44	26
6 - 10 years	38	24
11 - 15 years	28	17
16 - 20 years	21	13
over 20 years	32	20
TOTAL	163	100%

individual buyer was considered to be an indication of his innovativeness. In [Table 4](#) it can be seen that

TABLE 4  
NUMBER OF NEW ITEMS ADDED TO PRODUCT LINE

Number of New Items	Number of Buyer Respondents	Percent
5 or less	5	15
6 - 10	20	14
11 - 20	25	18
21 - 50	28	19
51 - 99	7	5
100+	44	29
TOTAL	129	100%

29% of the respondents purchased 100 or more new items per year. The geographic coverage of the chain operations is displayed in [Table 5](#), where it can be seen

TABLE 5  
GEOGRAPHIC COVERAGE OF CHAIN

Geographic Coverage	Respondents	Percent
Within one province	32	19.6
Within several provinces	66	40.5
Covers all Canada	50	30.7
International	15	9.2
TOTAL	163	100.0%

that one fifth of the respondents restricted their operations to one province, while two fifths were nation-wide in scope. The most represented type of product line was clothing followed by supplies and furnishings for the home ([Table 6](#)). Roughly one third of the respondents worked in chains employing 5 or

fewer buyers ([Table 7](#)), while 18% worked in companies with more than 50 buyers. The age of respondents is shown in [Table 8](#). In [Table 9](#) it can be seen that all but one of the respondents had completed high school or a higher level of education. The number of stores in the responding chains is shown in [Table 10](#), while [Table 11](#) indicates the age of responding companies.

TABLE 6  
TYPE OF GOODS PURCHASED

Type of Good	Respondents	Percent
Clothing	49	30.8
Home Renovation	29	18.2
House Furnishings	34	21.4
Other	47	29.6
TOTAL	159	100.0%

TABLE 7  
NUMBER OF BUYERS IN CHAIN

Number of Buyers	Responses	Percent
1 - 5	51	32
6 - 10	42	26
11 - 20	25	16
21 - 50	11	8
Over 50	27	18
TOTAL	156	100%

TABLE 8  
AGE OF RESPONDENT BUYERS

Age	Responses	Percent
24 - 30	30	19
31 - 40	57	35
41 - 50	50	31
51 - 65	24	15
TOTAL	161	100%

TABLE 9  
HIGHEST EDUCATIONAL LEVEL OF BUYERS

Education Level	Responses	Percent
Public School	1	.6
High School	71	43.5
Community College	20	12.3
University	61	37.4
Professional Designation	10	6.2
TOTAL	163	100.0%

TABLE 10  
NUMBER OF STORES IN CHAIN

Number of Stores	Responses	Percent
5 - 9	18	11
10 - 19	17	11
20 - 29	26	16
30 - 49	13	8
50 - 99	19	12
100 - 199	27	16
200 - 399	24	15
400+	17	11
TOTAL	161	100%



TABLE 11  
AGE OF FIRM

Age	Responses	Percent
0 - 19	27	17
20 - 39	28	18
40 - 59	22	15
60 - 99	40	25
100+	40	25
TOTAL	157	100%

Criteria

The list of decision criteria which had been developed and revised according to personal interviews with purchasing executives was organized under seven categories. Respondents ranked the 33 categories on a five point semantic differential scale according to their importance in assessing whether or not to adopt a new product. The seven categories are listed in sequence of their weighted importance to respondents in Table 12.

TABLE 12  
CRITERIA SALIENCE

A. PROFIT	
1. Expected profit contribution	470
2. Retailer or dealer markup	454
B. LEGAL CONSIDERATIONS	
1. Potential liability of retailer concerning the new product	418
2. Meets government regulations	454
3. New product raises questions concerning warranty on customer's other products	369
C. TIMING CONSIDERATIONS	
1. Timing of supplier's sales calls	357
2. Product introduction timing	422
3. Economic conditions	382
4. Fit with new trends in market	423
D. PRODUCT/MARKET CONSIDERATIONS	
1. Potential market volume	444
2. Favourable test market results	378
3. Evidence of another major retailer's purchase of product	281
4. Product range	347
5. Quality	456
6. Life cycle considerations	365
7. Competitive price	434
8. Fits gaps in retailer's line	395
E. SUPPLIER	
1. Supplier's known track record	436
2. Well-known brand name	382
3. Single source wide product range	323
4. Financial capabilities	376
5. Initial supply capabilities	430
6. Ability to fill repeat orders quickly	459
F. PRODUCT UNIQUENESS	
1. Distinctive styling	378
2. New combination of function	355
3. Performs some functions better than current products	380
4. New features built into the product	367
5. Function not previously available	366
6. Well-known brand name	378

G. PROMOTION

1. Advertising support by manufacturer (supplier)	419
2. Instore point of sale promotional material provided by supplier	338
3. Manufacturer's rebates to consumer	282
4. Package attributes	360

It can be seen that the most salient criteria, in order of importance, are:

- 1) expected profit contribution
- 2) supplier's ability to fill repeat orders quickly
- 3) product quality
- 4) product meets government regulations
- 5) retail or dealer mark-up
- 6) potential market volume
- 7) supplier's known track record
- 8) competitive price
- 9) manufacturers' initial supply capabilities
- 10) product fits new trends in market

Other factors that were considered important in the new product adoption decision which had not been included in our list of 33 items included in order of importance:

- 1) exclusivity - the desire of the buyer that his chain be the only outlet in his trading areas to handle the new product.
- 2) Physical Distribution Considerations - terms of purchase vs. SKUs (stock-keeping units), transport mode vs. freight rates, rebates, etc.
- 3) image - the ability of the new product to be congruent with the image projected by the retail chain and the types of products it already carries.
- 4) Trustworthiness - the perceived honesty and reliability of the supplier.

A number of hypothesized relationships were tested using Chi Square analysis. At the 5% level of significance it was shown that the businesses with more outlets in their chain operation adopted proportionately more new products per buyer than the smaller chain operations. At the 10% level of significance it was found that in chain stores with a larger number of people responsible for buying, there was a relatively larger percentage of new products purchased. Also at the 10% level of significance it was found that the most innovative firms are in the category 31-80 years in existence, whereas younger firms are likely to adopt a relatively smaller number of new products per year, and the oldest firms tend to be the most conservative, buying the smallest number of new items per year.

In contrast to the company characteristics' relationship to innovation, hypotheses concerning buyer relationships indicated that at the 5% level of significance, buyers with higher educational achievement than high school were relatively more frequently represented in the middle of the distribution of the volume of new items purchased annually. Those whose highest level of achievement was high school completion or less tended to be more often represented in the extremes of new product purchases -- that is they were either more risk averse or more risk tolerant.

Those buyers with educational achievement beyond high school tended to choose to work in chain operations which either operated within the confines of one pro-

vince or were nation-wide in scope, whereas proportionately more of those with high school or less worked in chains whose market encompasses a few provinces. This was significant at the 5% level.

The range of products offered by a new product supplier was found to have substantial appeal among chains of varying size. The larger the chain, the relatively greater importance of the supplier having a broad product range. This was shown by three measures of firm size: by dollar sales, and by number of buyers in the firm, both at the 5% level of significance, and by the number of outlets in the chain organization at the 1% level. None of the other hypothesized relationships were significant.

#### Factor Analysis

Factor analysis is useful in ascertaining conceptual cohesion underlying response patterns. The 33 criteria used in assessing new products were factor analyzed using varimax rotation and an eigenvalue of 1.00 was set as the lower limit. Eleven factors were extracted and factor loadings greater than .5000 were used to identify the factors. It is interesting to note that the original seven category grouping of criteria used by the authors was not substantiated by the factor analysis. Examination of the eleven factors indicated to the authors that meaningful factor groupings indeed had been attained. The eleven factors explained 65.4% of the variance. These factors and their descriptors are listed in [Table 13](#).

TABLE 13  
FACTOR ANALYSIS OF DECISION CRITERIA

Factor	Descriptor	Decision Criteria Included
1	Brand Image	- product well-known brand name - advertising support by manufacturer - supplier well-known brand name
2	Function	- new combination of functions - performs some functions better than current products - new features built into the product - function not previously available
3	Timing	- fits gaps in retailer's line - timing of suppliers' sales calls - product introduction timing - economic conditions
4	Confidence In Supplier	- financial capabilities - initial supply capabilities - ability to fill repeat orders quickly
5	Merchandising Support	- instore point of sale promotional material provided by supplier - manufacturer's rebates to consumer - evidence of another major retailer's purchase of product
6	Risk Reduction	- potential liability of retailer concerning new product - meets government regulations - new product raises questions concerning warranty on customer's other products

Factor	Descriptor	Decision Criteria Included
7	Profit	- expected profit contribution - retailer or dealer markup
8	Fashion	- distinctive styling - fits with new trends in market
9	Market Potential	- potential market volume - favourable test market results
10	Life Cycle	- quality - life cycle considerations
11	Package	- package attributes

#### Conclusion

At this stage of the research it would appear that the small, relatively unknown supplier has a better chance of having his new product adopted by one of the larger chain operations since they tend to be more innovative in their new product selection than smaller chains. However, larger chains expect the supplier to have a broad product range. Consequently this would limit the number of small, unknown suppliers who can apply this type of segmentation.

Generally speaking, the importance of brand image, as indicated by factor analysis, would militate strongly against a relatively unknown supplier. To the extent that such a supplier could fulfill the expectations of CBUs regarding the most highly ranked decision criteria (expected profit, ability to fill repeat orders, quality, etc.), his chances would be improved.

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INTEGER GOAL PROGRAMMING FOR MEDIA SELECTION  
IN THE INDUSTRIAL ELECTRONICS MARKET: AMELIORATING  
CONFLICTING MANAGEMENT PREFERENCES

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Abstract

Integer Goal Programming is shown to be an effective tool for media selection in a firm where conflict exists among marketing, sales and other executives in terms of media preferences and perception of market segment importance. A multiple stage iterative use of integer goal programming is presented.

A very important part of the marketing function is to decide on the best media channels for carrying the advertising message to the intended audience. The advertising media selection decision involves the allocation of limited advertising dollars among alternative vehicles in an attempt to achieve the goals of the company. Thus, to maximize the return on advertising expenditures the advertiser must create the "best" messages and place them in the "best" media on the "best" schedule of media placements. Every introductory advertising textbook devotes one or more chapters to advertising media evaluation which is aimed at determining what available media alternative is best for a particular purpose.

The fact is that major advertisers selling similar products may often have quite different ideas as to the most effective combination of media. Traditionally advertising managers or media planners have been guided by previous experience, personal knowledge, and industry convention. The early work on the application of quantitative techniques to this area was done by the advertising agency Batten, Barton, Durstine and Osborne (Buzzell, 1975), and others (Day, 1962) (Engel and Warshaw, 1964) who all applied linear programming to the question of how to achieve an optimal media selection decision. Linear programming was at first enthusiastically received as a pioneer practical breakthrough in the application of quantitative techniques to media selection. Although linear programming does offer advantages in solving media selection problems, its inability to deal with many of the complexities of the real world has limited its use. Several specific criticisms: the possibility of fractional solutions, failure to consider audience duplication, the assumption of constant media costs, and a misleading impression of definiteness have been developed (Engel, Wales, and Warshaw, 1975). These criticisms encouraged several theoreticians to advocate the application of integer goal programming to the media selection problem. (Charnes et al., 1968) (Lee and Bird, 1970) (Lee and Nicely, 1974) (Keown and Duncan, 1979). These advocates consider that the technique offers advantages in allowing the advertising manager to consider multiple, conflicting goals in optimization problems. Also, the use of integer programming in conjunction with goal programming can allow consideration of interactive media effects, decay effects, threshold levels, and quantity discounts in media selection decisions.

The purpose of this paper is to extend these discussions by describing the use of integer goal programming as a tool for assisting media selection decisions by one specific firm in the industrial electronics industry (television equipment). This paper

illustrates several modifications in the implementation of the technique that make the results especially amenable to use by practicing executives. Specifically, this paper illustrates the addition of a multiple stage iterative process involving the resolution of certain goal conflicts. The specific step-wise process allows for a consensus decision among marketing and sales executives who, although in the same firm, address different markets with different, but sometimes overlapping, print media coverage.

The company in this example is a publicly held firm with gross sales for the year in question of \$15,000,000. The company manufactures equipment for broadcast television, cable television (CATV), and closed circuit television. In addition, the firm operates a sales company to sell its closed circuit television products in several geographic market areas. Manufacturing activity accounts for 40% of the firm's gross revenues and 70% of the firm's profits. The firm employs three separate and different marketing channels, one for each of the markets its addresses:

Broadcast Television: A broadcast sales manager reporting to the Vice-President of Marketing sells directly to networks and group owners, and assigns other accounts to the company branch offices in their territories. This division also handles accounts in distributor territories directly.

Cable Television: A CATV sales manager with one assistant reporting to the Vice-President of Marketing covers all accounts directly. This division allows branch offices to participate on specified accounts.

Closed Circuit Television: For the territories where the company does not have branch offices, a distributor sales manager, who reports to the Vice-President of Marketing, sets up distributors and dealers. In the territories where the company has branch offices they operate as exclusive distributors. All branch managers report to the Vice-President for Sales.

The company's branch offices are in many major cities, although several key territories are handled by distributors.

Both the Vice-President of Marketing and the Vice-President for Sales report to the President, who is the CEO of the firm.

The Advertising Manager and the Product Promotion Manager report to the Vice-President of Marketing and organizationally are on the same level as the sales managers. An advertising agency is used, but only for ad copy preparation and placement. All media

scheduling is done by the Advertising Manager in cooperation with the Product Promotion Manager.

The dual sales organization for the most part worked well. However, there was a basic conflict in sales goals. The marketing channels reporting to the Vice-President of Marketing sold the company's manufactured products exclusively. The branch offices also sold vendor supplied products. In fact, company manufactured products accounted for only 30% of their sales volume.

Table J summarizes the percentage of manufacturing output, revenue, and profit that each marketing channel generates.

TABLE 1  
OUTPUT, REVENUE, AND PROFIT  
BY MARKETING CHANNEL

	Broadcast	CATV	Closed Circuit
Output	5%	10%	85%
Revenue	10%	40%	50%
Profit	15%	25%	60%

Source: Internal Financial Records of Subject Firm

The Vice-President for Sales, although he would agree with the goal of emphasizing the sale of manufactured products, was, along with his branch managers, compensated on a sales volume basis. This resulted in the company branches having high overall revenue, but with a low percentage of company manufactured products.

This represents the core of the conflict in goals: the Vice-President for Sales prefers an advertising schedule that favors the closed circuit market, the Vice-President of Marketing expresses no preference but rather wishes to use advertising dollars to promote the company's products to the markets where sales return a higher profit, namely broadcast and cable. It is also recognized that the distributor network is provided by language in the franchise agreement with a promise of advertising directed toward their market (closed circuit). The President favored the broadcast market heavily owing to its greater perceived prestige over the other markets, and preferred to direct advertising accordingly.

This all led to a conflict regarding promotional preferences, as can be seen in Table 2.

TABLE 2  
PROMOTIONAL PREFERENCES BY MARKETING CHANNEL

Channel:	Branches	Broadcast Sales	CATV Sales	Distributor Sales
Market:				
Broad- cast	3	1	2,3	3
CATV	2	2,3	1	2
Closed Circuit	1	2,3	2,3	1

Source: Interviews with responsible executives

All distributor channels preferred a media exposure in the closed circuit market, with the cable market second. This no doubt reflects the revenue opportunity of these marketing channels. The market segments with dedicated sales managers preferred that exposure be concentrated in their respective markets.

The media budget for print media was \$45,000. This is a small part of the total advertising and promotion budget of the company. The company was a major exhibitor at trade shows, and a moderate user of direct mail advertising.

The company considered nine controlled circulation magazines to be important relative to the lines of business of the firm. These publications are presented in Table 3, which identifies the circulation by relevant market, the frequency of appearance, and the cost for a one page black and white ad at the rate for which a quantity discount is earned.

TABLE 3  
PREFERRED PRINT MEDIA DATA

Title	Frequency	Circulation		Page Cost
		Broadcast	CCTV	
Broadcast	52	8,000	1,000	nil \$1,200
BME/CME	12	9,200	4,000	1,000 1,030
Broadcast Engineering	12	8,000	3,000	2,500 375
Cablecasting	12	nil	5,000	nil 500
CATV	52	nil	3,000	nil 445
TV Communications	12	100	6,000	500 740
Actual Specifying Engineer	12	nil	nil	20,000 1,020
Education & Instructional Television	12	2,000	nil	15,000 800
Educational Broadcasting	6	1,000	nil	15,000 890

Source: Business Publications Rates and Data

The firm's advertising agency specialized in industrial accounts, but did not participate in media selection for this firm. However, the agency did rank the nine publications for the firm based on reader service return, and also upon the results of surveys taken in the respective markets. The following represents the agencies ranking:

Publication	Rank
Broadcasting	8
BME/CME	5
Broadcast Engineering	7
Cablecasting	4
CATV	6
TV Communications	1
Actual Spec. Engr.	2
Educ. & Indust. TV	3
Educational Broadcasting	9

The company advertising manager also had a ranking of market preference priorities of the various responsible executives and also of himself and the Product Promotion Manager.

TABLE 4  
MARKET PRIORITY PREFERENCE

Market	Pres	VP-Sales	VP-MKT	Advt Mgr	Prod Prom Mgr
Broadcast	1	3	3	2	2
CATV	3	1	2	3	3
Closed Circ.	2	2	1	1	1

Source: Interviews with the indicated executives

This variation in priorities can partially be explained by the background of several of the individuals, particularly the President and the Vice-Presidents who came from the market areas where their number one preference is noted. The priorities expressed by both the advertising manager and the product promotion manager reflect the profit potentials of the various markets.

The advertising manager in the midst of all of the apparent conflicts had the duty of formulating a media schedule that would be acceptable to all concerned parties and that would also fulfill several goals. The following goals were recognized and are listed in priority order:

1. The \$45,000 media budget was to be 100% spent
2. The media budget could be exceeded at most by 10%
- \*3. Advertise in a way to stimulate sales in market segments in relation to profit potential
4. Maximize advertising exposure
5. Minimize media overlap
6. Maximize quantity discounts

\*This goal is not clearly definable due to the different rankings by the executives who must buy-off on the media schedule.

Integer goal programming was used to develop a media placement schedule that would minimize the under achievement of these goals. The first round of the process utilized the market priorities of the advertising manager. This meant that publications addressing the broadcast market received second priority, publications addressing the CATV market received third priority. This put a heavy emphasis on the manufactured products of the company as well as the area for greatest sales growth. This priority scheme also provided for necessary product identification advertising to the distributor network including the owned branch offices.

Since an Integer solution was required an established basic methodology was followed (Keown and Duncan, 1979). Audience duplication was explicitly dealt with as was any possibility of overexposure. A tested algorithm (Lee and Morris, 1977) was utilized on a CDC Cyber-172 computer.

The results of the first round solution was not presented to the responsible executives. The executives were shown, instead, the resultant media placement deviations from goals relative to each market. They were then asked, considering the achievement of the first goal and under achievement of the second goal, if they wanted the underachievements modified.

The resulting desires to have under achievements modified were then utilized to modify goal priority number 3, which would now show preference for a different priority among the publications. This then allowed the model to be reoptimized.

The second round results in terms of the underachievements were again presented for possible modification. These modifications allowed further change in goal 3. After the third optimization the responsible executives desired no further changes.

This procedure permitted the various executives to allow their different perspectives to be converged into a mutually agreed upon media schedule.

In each round each executive responded to all of the deviations, that is to say for each of the nine publications, and they were free to request that it be raised or lowered. Table 5 presents the third round solution in terms of the decision variables, the publication insertions.

TABLE 5  
PUBLICATIONS AND NUMBER OF PLACEMENTS

<u>Variable</u>	<u>Number of Placements</u>
Broadcasting	13
BME/CME	6
Broadcast Eng.	6
CATV	0
Cablecasting	0
TV Communications	13
Actual Spec. Engr.	6
Educ. & Ind. TV	6
Educational Broad.	3

The final optimization provided the following results:

<u>Goal</u>	<u>Status</u>
1	Achieved
2	Under achieved by \$2,260
3	Achieved
4	Under achieved by \$4,320
5	Over achieved by \$1,650
6	Achieved

This method of combining integer goal programming with an interactive multi-stage process of decision maker interaction provides a useful tool for mollifying the apparent conflicting goals of multiple executives who must approve media placement schedules. This technique made the process go a lot smoother than when the selection process was done on the former more intuitive process.

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NORWEGIANS AND THE COMMON MARKET

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Abstract

The EEC of "Six" expanded to "nine" following the admission of Denmark, Ireland, and the U.K. on January 1, 1973. With the view of joining the EEC, the Norwegian government called for a referendum on September 25, 1972. The referendum did not get popular support and at the present time Norway stays out of the EEC. Given that Norwegians and other west Europeans have similarity with regard to economic, political, social, and cultural characteristics, it was surprising that the referendum did not receive popular support. This study was, therefore, designed to find out why Norwegians did not support the referendum to join the EEC. Responses provided by 306 households located in various parts of Norway revealed that the referendum was turned down because a great majority of Norwegians did not want to be governed by "Brussels". Any future attempt(s) to join the EEC may, therefore, emphasize that joining the EEC will not affect domestic economic and political policies.

Introduction

Norway, located in the northwestern part of Europe, has a constitutional monarchy. Its boundaries are--Sweden, Finland, and the Soviet Union in the east; North Sea and the Atlantic Ocean, in the south and west, respectively. The country is predominantly mountainous, located at a higher altitude compared to Europe as a whole. The major source of income (GNP) is derived from the manufacturing industry which produces goods for domestic consumption and export. Other sources of Norwegian GNP are--agriculture, oil, forestry, fishery, and mining. Sources of Norwegian GNP for the year 1979 is shown in **table 1**.

TABLE 1  
SOURCE AND AMOUNT OF NORWEGIAN GNP FOR 1979

Source	Percent of Total GNP	GNP in Billion Dollars
1. Social and personal services, hotel and restaurant, business, finance, and insurance.....	26.5	12.39
2. Manufacturing.....	16.9	7.94
3. Wholesale and retail trade....	13.0	6.09
4. Construction, mining and quarrying, real estate.....	12.8	5.99
5. Transport and communication including waterways.....	10.7	5.00
6. Crude petroleum, gas products, and oil pipelines.....	8.8	4.11
7. Agriculture, forestry, and fishery.....	5.0	2.36
8. Public utilities.....	3.9	1.83
9. Miscellaneous.....	2.4	1.14
Total.....	100.0	46.85

Source: Statistical Yearbook, 1980, (Oslo, Norway: Central Bureau of Statistics, 1980), p. 64.

The European Economic Community (EEC) also familiarly known as the Common Market became an entity on January 1, 1958, following the ratification of the "Treaty of Rome" by the national parliaments of six countries-- Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany. During November 1962, a seventh country, Greece, became an associate member and gained full membership on January 1, 1981. The EEC's role as a customs union goes beyond removal of tariffs and trade restrictions for the member countries. "The Rome Treaty provides for a still closer integration of the respective economies with a full economic union as the ultimate goal" [Krause].

The common market, a community of growing political and economic power has great impact on the rest of the world. The rapidly growing economic strength has been accompanied by political and socioeconomic integration of the member nations. The EEC has substantially changed not only the material world in which the Europeans live but also their lifestyle. Attitude of the rest of the world toward the Western Europe as a whole has changed dramatically on account of this "peaceful revolution".

"The most serious problem faced by the EEC in moving toward its goal of economic, political, and social integration was the formation of the European Free Trade Association (EFTA) in November 1959" [Nystrom]. The EFTA member countries--Austria, Denmark, Portugal, Sweden, Switzerland, and the United Kingdom, removed all tariff and quota restrictions on industrial trade among them in 10 years. But, unlike the EEC, EFTA did not set up a common external tariff and did not include agricultural trade.

For the past several years Norway has played a significant role in trading with the EFTA countries. Norwegian imports from and exports to EFTA countries accounted for 27 percent of the total imports and 16 percent of the total exports, respectively, for the year 1979. Balance of payment from Norway to other EFTA countries amounted \$2.06 billion during 1979 (1 U.S. dollar = 5 Norwegian kroner) [Statistical Yearbook, 1980]. Prior to the expansion of EEC, the trade between Norway and EFTA and Norway and the EEC of "six" were as follows. Of the total import amounting to \$5.76 billion during 1972 imports from the EEC of "six" accounted for \$1.52 billion or approximately 26 percent of the total. Imports from EFTA for the same period represented a total of \$2.55 billion or approximately 44 percent of the total imports. Exports to EEC of "six" and EFTA accounted for \$1.03 billion and \$2.05 billion for 1972. These figures indicate that trade between Norway and the EFTA to be of greater economic importance compared to the trade between Norway and the EEC of "six" prior to expansion of the EEC from "six" to "nine" [Statistical Yearbook, 1973].

Formation of the EFTA in November 1959, resulted in two trading blocks, the EFTA and the EEC, within the western Europe. "This division of Europe's principal trading nations into two rival groups aroused fears, particularly in the United States. Although both blocks were committed to more liberal trade, the varied attitudes and policies adopted in pursuit of this objective raised the danger of severe dislocation and political disunity" [Nystrom].

Any European country with a democratic form of government can apply for the EEC membership. To gain entrance to the community as a full fledged member, a country must accept the EEC's long term economic and political goals. Some economically weaker and politically neutral countries have, therefore, limited their links to free trade agreements with the community. It is important to recognize, however, that when a country becomes a full fledged member of the EEC it cannot simultaneously continue membership in any other trading block. The member countries are, however, free to trade with any country of their choice. Any country wanting to become the EEC member should note that there is no treaty provision for withdrawing from membership. Moreover, the participating countries' economies are so closely interrelated and it would be against the economic interests of the member country to withdraw from the EEC membership.

On January 1, 1973, Denmark, Ireland, and the United Kingdom were admitted to the EEC as members. The EEC with nine member nations has become the world's third superpower. With a population of approximately 260 million, the EEC of "nine" represents a powerful combination of human and material resources. "As a unit, it is the world's largest importer and the world's second largest producer of automobiles, steel, and coal. Excluding the associated territories overseas, the EEC is about one-sixth as large in area and one-fifth larger in population than the United States. Taken as an economic unit, it is ahead of the Soviet Union and second to the United States in industrial production. Its potential for future economic progress has been underscored by an exceptionally high rate of economic growth in recent years. Despite national and regional differences, the EEC countries are economically competitive as well as complementary" [Nystrom]. Growing consumer market, availability of highly skilled and industrious workers, government policies and business environment conducive for operating industries and businesses, and a highly developed tradition in the area of international trade are some of the greatest strengths of the EEC.

Following the passage of the referendum to join the EEC, the two EFTA countries--Denmark and the United Kingdom, were admitted to the EEC as members. Although Norway might have derived benefits by joining the EEC, failure of the referendum has made it to continue as an EFTA member. Table 2 provides a comparison of the geographic, demographic, and economic profile of the EEC and Norway for the year 1979. Table 3 shows data pertaining to trade between Norway and the EEC member countries for the year 1979.

Data provided in table 3 indicates the magnitude of trade between Norway and the EEC member countries and the significance of the trade to Norwegian economy.

#### Problem Statement and Objectives

With the intention of becoming the EEC member, Norwegian government called for a referendum on September 25, 1972. The referendum was not supported by the majority of Norwegians. Simultaneously, the governments of Denmark, Ireland, and the United Kingdom also called a referendum to decide whether to join the EEC. Passage of the referendum in these countries resulted in the expansion of the EEC from "six" to "nine" on January 1, 1973. Furthermore, Denmark and the United Kingdom ceased to be EFTA members because of their affiliation with the EEC. Failure of the 1972 referendum has kept Norway away from participating in many economic and political concerns of the European Community.

TABLE 2  
A COMPARISON OF THE GEOGRAPHIC, DEMOGRAPHIC, AND ECONOMIC PROFILE OF THE EEC AND NORWAY FOR THE YEAR 1979

Area, Population, GNP, and Trade	EEC	Norway	Percentage of the EEC
Area (thousand sq.miles)	589.00	125.06	21.23
Population (million).....	259.13	4.08	1.57
GNP (\$ billion)*.....	1,813.05	46.85	2.58
Export (\$ billion).....	381.93	13.70	3.59
Import (\$ billion).....	390.51	13.87	3.55

\* U.S. \$1 = 5.00 Norwegian kroner

Sources:

Statistical Yearbook 1977, (New York: The United Nations, Dept. of Internal Economic and Social Affairs, 29th Issue, 1978), p. 72.

Statistical Abstract of the United States 1978 (Washington, D.C.: The U.S. Dept. of Commerce, Bureau of the Census, 1978), p. 910.

International Financial Statistics, No. 9, Vol. XXXI, (Washington, D.C.: The International Monetary Fund, Sept. 1978), pp. 30-383.

Statistical Yearbook 1980, (Oslo, Norway: Central Bureau of Statistics, 1980), p. 5, 151.

TABLE 3  
NORWEGIAN EXPORTS TO AND IMPORTS FROM THE EEC MEMBER COUNTRIES DURING 1979

Country	Exports	Percent of total Exports	Imports	Percent of total Imports
	(\$Billion)		(\$Billion)	
Belgium & Luxembourg	0.14	1.59	0.45	6.93
Denmark.....	0.73	8.30	0.85	13.10
France.....	0.33	3.75	0.52	8.01
Italy.....	0.22	2.50	0.31	4.78
Netherlands.....	0.40	4.55	0.49	7.55
U.K. & Ireland.....	5.02	57.11	1.94	29.89
West Germany.....	1.95	22.20	1.93	29.74
Total.....	8.79	100.00	6.49	100.00

Source: Statistical Yearbook 1980, (Oslo, Norway: Central Bureau of Statistics, 1980), p. 172.

Reasons for failure of the Norwegian referendum could be many and may not be limited to economic and political factors. The major objective of this study was, therefore, to determine whether Norwegians were aware of the EEC and the socioeconomic benefits Norway could derive by joining the EEC. Specific objectives of the study, however, were to determine: (1) geographic location of the households and awareness of the EEC; (2) whether they participated in the referendum; (3) how did they vote in the referendum and why; and (4) how would they vote, if there were to be a new referendum.



Research Procedure

Accomplishing the objectives the study necessitated gathering data from Norwegian households located in various parts of the country. To obtain needed information, a two-page questionnaire written in Norwegian was used. The questions were arranged in a sequence to provide an easy flow of responses, and contained questions related to: (1) geographic location of the households included in the sample; (2) knowledge about the EEC; (3) participation in the 1972 referendum and voting pattern; and (4) demographic and socioeconomic characteristics of the respondents.

A total of 550 questionnaires were mailed to a sample of randomly selected households located in Bergen, Oslo, Stavanger, Trondheim and a couple of major cities in northern Norway. Addresses of the randomly selected households for each city included in the survey were obtained from the telephone directory for 1980. The package mailed to the households included: (1) a letter of introduction; (2) the questionnaire; and (3) a self-addressed stamped envelope. A total of 306 responses representing approximately 56 percent were received. Data provided by the households were coded, tabulated, and analyzed.

Findings

Location of Households and Awareness of the EEC

Response to question on the household location was provided by 295. Of this number, 161 or approximately 54 percent represented Trondheim and surrounding areas. The remaining responses were distributed in the following order: (1) Oslo, 22 percent; (2) Northern Norway, 14 percent; (3) Stavanger, 6 percent; and (4) Bergen, 4 percent.

Almost every Norwegian household, 293 out of 295 responses, representing approximately 99 percent of the respondents was aware of the EEC and its basic goals and functions. Question on the number of countries belonging to the EEC was answered by 298 households. Analysis of the data surprisingly showed that only 107 of the 298 respondents, representing approximately 36 percent of the total responses knew the exact number of countries in the EEC. Those that did not know the exact number, represented 55 percent of the total responses and gave 6, 8, 10 and 11 countries as EEC members. The rest, accounting for approximately 9 percent of the total response did not answer the question on number of countries in the expanded EEC.

When asked to list names of countries belonging to the EEC, 227 households provided responses. Correct listing of the names of member countries was provided by 124 or approximately 46 percent of the households responding to the question. The rest, representing 54 percent or 148 households either did not provide correct listing or did not answer.

Relationship between geographic location of the households and awareness variables is shown in [table 4](#).

Voting Pattern During Referendum and Reasons

When asked whether the households participated in the 1972 referendum to decide whether Norway should join the EEC, 295 individuals provided responses. Majority of the respondents representing approximately 81 percent or 238 stated that they voted during the referendum. The remaining 19 percent did not vote. The reason for not voting could be that those that did not vote

TABLE 4  
GEOGRAPHIC LOCATION OF HOUSEHOLDS AND AWARENESS OF THE EEC

Variable	n	d.f	$\chi^2$	$\alpha$	C
Have you heard about EEC	295	4	1.68	0.79	0.08
What is EEC.....	253	4	6.47	0.16	0.16
Number of countries					
belonging to EEC.....	298	8	16.05	0.04	0.23
List names of countries					
belonging to EEC.....	272	4	10.28	0.03	0.19

might have been below the voting age at the time the referendum to join EEC was held.

Voting Against Norwegian Membership and Reasons

Responses to question on voting pattern showed that 131 or 55 percent of the 238 who participated on the 1972 referendum voted against Norway joining the EEC. Reasons for not supporting the referendum to Norwegian membership in the Common Market were as follows: (1) economic and political, 62 percent; (2) national pride, 36 percent; and (3) culture and united Europe, 2 percent

Analysis of the data related to demographic and socioeconomic variables of those not supporting the referendum resulted in the following break-down: (1) male, 72 percent; (2) 31-50 years age group, 63 percent; (3) completed education ranging from realskole to university, 63 percent; (4) respondents' occupation--white collar, 57 percent; (5) spouse's occupation--white collar, 42 percent; and (6) annual household income--100,000 Norwegian Kroner or more, 58 percent. [Table 5](#) represents the results of  $\chi^2$  analysis for relationship between demographic and socioeconomic variables and the reasons for not supporting Norwegian membership in the EEC.

TABLE 5  
RELATIONSHIP BETWEEN DEMOGRAPHIC, SOCIOECONOMIC VARIABLES AND REASONS FOR NOT SUPPORTING NORWEGIAN MEMBERSHIP IN THE EEC

Variable	n	d.f.	$\chi^2$	$\alpha$	C
Sex.....	130	2	1.70	0.43	0.11
Age.....	131	6	4.18	0.65	0.17
Education.....	128	4	3.06	0.54	0.15
Respondent's occupation.	131	6	4.35	0.63	0.18
Spouse's occupation.....	105	6	0.50	0.99	0.07
Household Income.....	131	4	8.05	0.09	0.24

Voting for Norwegian Membership and Reasons

One hundred and seven individuals responded to the question on reasons for supporting Norwegian membership in the EEC. Reasons for supporting the referendum were as follows: (1) economic and political, 72 percent; (2) culture and united Europe, 24 percent; and (3) national pride, 4 percent.

Analysis of the data pertaining to demographic and socioeconomic characteristics of those supporting the referendum resulted in the following break-down: (1) male, 77 percent; (2) 31-50 years age group, 48 percent; (3) completed education ranging from realskole to university, 64 percent; (4) respondent's

occupation--white collar, 60 percent; (5) spouse's occupation--white collar, 28 percent; and (6) household income--100,000 Norwegian kroner or more, 71 percent. Table 6 shows the results of the  $\chi^2$  analysis for the relationship between demographic and socioeconomic variables and the reasons for supporting Norwegian membership in the EEC.

TABLE 6  
RELATIONSHIP BETWEEN DEMOGRAPHIC AND SOCIOECONOMIC VARIABLES AND REASONS FOR SUPPORTING NORWEGIAN MEMBERSHIP IN THE EEC

Variables	n	d.f.	$\chi^2$	$\alpha$	C
Sex.....	107	2	1.83	0.40	0.13
Age.....	107	6	4.80	0.57	0.21
Education.....	103	4	7.99	0.09	0.27
Respondent's occupation.....	106	6	2.35	0.88	0.15
Spouse's occupation.....	87	6	10.03	0.12	0.32
Household income.....	107	4	2.82	0.58	0.16

If there Were to Be a New Referendum, Will You Participate and How Would You Vote?

When asked whether the households would participate if and when a new referendum is held, 272 individuals stated that they will participate. Of this number, 67 households representing approximately 25 percent mentioned that they will support the Norwegian membership in the Common Market. Analysis of the data on the basis of sex indicated that of the 67 individuals who would favor Norwegian membership in the EEC, 77 percent were male and the rest female.

Response to the question on reasons for supporting Norwegian membership during a new referendum was provided by 67 individuals. Approximately 75 percent of the respondents were male and the rest were female. Reasons given by the male respondents were as follows: (1) economic and political, 73 percent; (2) culture and united Europe, 24 percent; and (3) national pride, 3 percent. Women responding to the question on reasons for supporting Norwegian membership in the EEC gave the following reasons: (1) economic and political, 82 percent; (2) culture and united Europe, 12 percent; and (3) national pride, 6 percent.

Analysis of the data on demographic and socioeconomic characteristics of the respondents supporting Norwegian membership in the EEC in a new referendum resulted in the following breakdown: (1) male, 77 percent; (2) 31-50 years age group, 50 percent; (3) completed education ranging from realskole to university, 62 percent; (4) respondent's occupation--white collar, 67 percent; (5) spouse's occupation--white collar, 25 percent; and (6) annual household income--100,000 Norwegian kroner or more, 75 percent. Relationship between the demographic and socioeconomic characteristics of the respondents and reasons for supporting Norwegian membership in EEC in a new referendum is shown in table 7.

Voting pattern during the 1972 referendum showed that 55 percent of those who voted were against Norwegian membership in the EEC. When asked how they would vote if there were to be a new referendum, of the 272 respondents only 67 households representing 25 percent said that they support the EEC membership. This reflects that even if there were to be a new referendum, a great majority of Norwegians may not support membership in the EEC.

TABLE 7  
RELATIONSHIP BETWEEN DEMOGRAPHIC AND SOCIOECONOMIC VARIABLES AND REASONS FOR SUPPORTING MEMBERSHIP IN A NEW REFERENDUM

Variable	n	d.f.	$\chi^2$	$\alpha$	C
Sex.....	67	2	2.31	0.31	0.18
Age.....	67	6	3.70	0.72	0.23
Education.....	65	4	4.97	0.29	0.19
Respondent's occupation.....	67	6	11.70	0.07	0.38
Spouse's occupation.....	58	6	1.49	0.96	0.16
Household income.....	67	4	1.64	0.80	0.15

To find out why Norwegians do not favor joining the EEC, two questions were asked. One of the questions was intended to ascertain how firmly Norwegians believed that they can stay away from the Common Market. When asked, do you believe that Norway ought to stay away from the EEC? 285 households responded. Of this number, 219 or approximately 77 percent said yes and the remaining 66 or 23 percent said no. This indicates that the Norwegians strongly believe that their country should stay away from becoming the EEC member.

The second question was intended to find out why Norwegians believe so strongly that they ought to stay away from the EEC. The majority of households answering the question said, "We do not want to be governed by Brussels." This indicates that most Norwegians may be concerned about what might happen to their economic and political freedom if Norway joins the EEC. It is important, therefore, that any effort to gain support from the Norwegians to join EEC may have to emphasize that joining the eec will not have an adverse effect on the domestic economic and political policies. If this is done, it is probable that a future referendum, if there were to be one, to join the Common Market, may get popular support.

#### Summary and Conclusion

The EEC founded by the "six" west European countries on January 1, 1958, was expanded into "nine" by admitting Denmark, Ireland, and the United Kingdom on January 1, 1973. The referendum sponsored by the Norwegian government during September, 1972 to decide whether to join the Common Market did not get the popular support. Analysis of the data provided by 306 households located in various parts of Norway revealed that the majority did not want to be governed by "Brussels". Any future attempt(s) to join the EEC may, therefore, have to emphasize that gaining membership in the Common Market will not affect domestic economic and political policies. If this is done, it is probable that the Norwegians will approve the government's decision to join the EEC.

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## U.S. EXPORT TRADING COMPANY: A MODEL OF EXPORT PROMOTION IN THE 80's

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### Abstract

In order to promote US exports in the 1980's, it appears that complete reliance on the existing channel of international distribution which consists primarily of the Webb Pomerene Associations (WPA's) and the Export Management Companies (EMC's) would be disastrous due to many problems which stem from the organization of those export firms, the "Why bother?" and "Do-it-yourself" attitude of the US manufacturers and the lack of an adequate legal framework which is needed to promote the expansion of a viable US export organization. Lessons of experience gathered from the Japanese Sogo Shosha and the European export trading companies (ETC's) indicate that it is conceivable to formulate an American model of ETC. To be successful, such American model of ETC requires a strong back-up from the US Government in order to provide incentives to US manufacturers to export and to do so through the ETC's. The government should also provide an adequate legal framework in order to promulgate the development and growth of US Export Trading Companies. The Webb Pomerene Act of 1918 could be amended and improved in order to allow the US ETC's to integrate vertically or horizontally and to include exports as well as imports for better economies of scale. Finally, it is even conceivable to make the American ETC a quasi-public institution in order to avoid anti-trust complications.

### Introduction

The US merchandise trade deficit declined from \$28.4 billion in 1978 to \$24.7 billion in 1979.\* The decline came about as a result of an increase in foreign demand for US goods and a somewhat slower growth in US imports of nonpetroleum products. Note, however, that the US merchandise trade balance for 1980 and later is likely to worsen if oil price keeps at this pace and especially if the US keeps losing sizable export markets of grain and manufactured goods. US import needs will continue to grow and US exports must catch up and at least keep pace with imports. This is especially true when exports account for one out of every four dollars of farm sales and manufactured good exports account for one out of every nine jobs in the manufacturing sector.

The realities of today have become such that the US can no longer consider its economic future without trying to promote her exports. It is, therefore, significant to find out an alternative way to facilitate exports of US products overseas. The purpose of this paper is to focus on one particular aspect of export promotion which is the channel of international distribution for US goods via export trading companies (ETC's). An attempt to develop a US model of ETC will be made based on the analysis of existing major US channels of international distribution which consist primarily of the US Webb-Pomerene Association (WPA's) and the US export management companies (EMC's). Also, the experiences from the Japanese and European ETC's will be drawn upon in the development of a US model of ETC.

\*Federal Reserve Bank of Chicago, International Letter, February 15, 1980, p. 1.

### What's Wrong With US WPA's?

#### The Webb-Pomerene Act

The US Webb-Pomerene Associations (WPA's) were formed based on the Webb-Pomerene Export Trade Act of 1918 which allows groups of business firms to export through a common sale association by declaring that the Sherman Act does not apply to any association which has the sole purpose of engaging in export trade and actually engaged solely in such export.

The Webb-Pomerene Act is, hence, an exception to the US antitrust laws which ordinarily prohibit competitors from acting together. The law was passed following studies made by the Federal Trade Commission which reported that "if Americans are to enter the markets of the world on more nearly equal terms with their organized competitors and their organized customers and if small American producers and manufacturers are to engage in trade on profitable terms, they must be free to unite their efforts."\*\* The intent of the Commission was to help smaller firms to gain the economies of scale via combined efforts in order to compete more efficiently against foreign cartels. Together smaller firms can conduct marketing research on foreign markets, reduce the unit costs of international distribution with high volume or standardize grading of products.

The Webb-Pomerene Act specifies also that the WPA's should not artificially or intentionally restrain US domestic trade, affect US domestic prices or restrain the export trade of any US competitor of the association. Under a consistent interpretation by the Federal Trade Commission and the US Court of Justice, WPA's can fix prices and set up quotas for overseas markets. Note, however, that the Act applies solely to the export of goods, ware or merchandise but not to services or licensing transactions.

#### WPA's Performance: A 60-Year Review

The performance of WPA's since 1918 has not been a success as indicated by their growth pattern measured by the number of associations registered with the Federal Trade Commission. Between 1918-65, a total of 176 associations were registered; of these, only 130 ever functioned. In 1965, there were 32 registered associations; of these, only 29 were active. By mid-1978, there were 30 WPA's as shown on Table I and only 27 of these associations were active\*\*\* Hence, the number of active registered WPA's has dwindled during the last 60 years and the expectation of promoting US exports via the WPA's channel of international distribution has failed to materialize.

\*\*Federal Trade Commission, Reports on Cooperation in American Export Trade, Part I, 1918, p. 8.

\*\*\* The data of this section is found in two studies made by The Federal Trade Commission: Webb-Pomerene Associations: A 50-Year Review, June 1967 and Webb-Pomerene Associations: Ten Years Later, November 1978.



TABLE 1  
REGISTERED WEBB POMERENE ASSOCIATIONS  
1978

Name	State	No. of Members	Product Line
1. Afram Films, Inc.	NY	7	Films
2. Amatex Export Trade Assn., Inc.	SC	23	Textiles
3. American Barter Trade Assn.	WA	4	Agriculture
4. American Cotton Exporters Assn. Inc.	TN	31	Cotton
5. American Machine Tool Corporation, Inc.	MA	11	Machine Tool
6. American Motion Picture Export Company, Inc.	NY	9	Motion Picture
7. American Wood Chip Export Assn.	OR	6	Wood Chips
8. California Avocado Export Assn., Inc.	CA	5	Avocados
9. California Dried Fruit Export Assn.	CA	27	Dried Fruit
10. California Rice Export Corporation	CA	4	Rice
11. Citrus Shippers United	CA	29	Citrus Fruit
12. Institute of Pacific Trade Relations	CA	2	Commodities
13. International Homes Group	MA	4	House Products
14. Kaolin Clay Export, Inc.	NJ	3	Clay
15. Motion Picture Export Assn. of American, Inc.	NY	9	Motion Pictures
16. North Coast Export Co.	CA	7	Lumber
17. North Coast Export Cooperative, Inc.	CA	7	Lumber
18. Northwest Dried Fruit Assn.	OR	6	Dried Fruit
19. Overseas Trading Co. Development Assn.	CA	2	Commodities
20. Pacific Agricultural Cooperative for Export, Inc.	CA	14	Agriculture
21. Pacific Coast Bituminous Coal Exporters Assn.	CA	2	Coal
22. Pacific Coast Merchant's Exchange	CA	2	Commodities
23. Phosphate Chemicals Export Assn.	NY	4	Phosphate Chem.
24. Phosphate Rock Export Assn.	FL	6	Phosphate Rock
25. Pulp, Paper and Paperboard Export Assn. of the U.S.	PA	16	Paper Products
26. Sulphur Export Corporation	NY	2	Sulphur
27. Talmex Export Corporation	CA	6	Tallow
28. Tire Equipment Manufacturers Consortium of Ohio	OH	3	Tire Equipment
29. U.S. Ordnance Producers Assn. Inc.	DC	4	Ordnances
30. West Coast Perishable Export Assn. Inc.	CA	13	Perishables
31. Wood Fiber Marketing Corporation	CA	67	Wood Fiber

Name	State	Members	Product Line
32. Worthington Compressor Packagers Int'l. Inc.	TX	4	Compressors

Source: Federal Trade Commission, 1978.

The low performance of the WPA's in promoting US exports could be shown also by their shrinking share of exports as a percentage of total US exports. WPA's assisted exports up to 1930 averaged around 12 percent of total national exports annually. The share dropped to an annual average of 2 percent in the 1940's. By 1976, only 1.5 percent of total US exports went through the WPA's.

By function, it is shown on Table 2 that, overall, fewer services are provided by the WPA's since 1962 despite the fact that the total number of operative WPA's remained fairly constant ever since. The major function of price settings and market allocation originally conceived by the Webb-Pomerene Act of 1918 have actually dropped. As shown on Table 2, only 8 WPA's performed the price setting function in 1978 as compared to 13 in 1962. During the same period, the number of WPA's which performed the market allocation has dwindled from 6 to 3. Note also that the number of WPA's performing sale via overseas offices dipped from 13 to 6 between 1962-78. Only three functions appear to have increased; notably, freight and insurance services, market research and information services and negotiations during the same period. Finally, export financing has never been an important function performed by the WPA's and processing or labeling of products were nonexistent.

TABLE 2  
WEBB-POMERENE ASSOCIATION FUNCTIONS  
1962 - 1978

Function	Number of Associations Performing Functions	
	1962	1978
I. Product Functions (Processing and Labeling)	0	0
II. Pricing Functions (Price Setting)	13	8
III. Promotion Functions	12	NA
IV. Distribution Functions:		
. Freight and Insurance	8	11
. Warehousing	2	2
. Market Allocation	6	3
. Selling Agent From US offices	8	8
. Selling Agent from overseas offices	13	6
. Export Merchant	NA	14
V. Other Functions:		
. Market Research and Information and statistics	13	19
. Engineering and Licensing Services	8	3
. Negotiation and Contracts	8	11
. Export Financing	2	NA

Source: Federal Trade Commission, 1962, 1978

## Causes of WPA's Failure

The causes of failure come from: 1) the WPA's; 2) their clients; and 3) the legal basis provided by the Webb-Pomerene Act itself discussed as follows:

1. The WPA's failed mainly because of: a) their marketing "mix"; b) their marketing policy concerning their target markets; and c) their export organization. In terms of marketing "mix", the WPA's failed to provide a "total product" package needed by their customers at a comparatively low cost. As indicated on [Table 2](#), the WPA's failed to satisfy their customers as far as the product processing and labeling functions are concerned. Without the WPA's help, it is hard for US exporters to figure out, for instance, the types of labeling requirements to be met in an African country such as Zaire as compared to different requirements found in Singapore for the very same product such as canned pineapple. The WPA's also failed to have a "total product" because they did not provide financing facilities much needed by smaller US exporters. Furthermore, as an agent in the entire channel of international distribution, the WPA's failed to have sufficient foreign offices in order to establish themselves overseas and promote efficiently US products in highly competitive foreign markets. Last but not least, the WPA's failed to accomplish economies of scale via high numbers of members and for high volume of business. As indicated on [Table 1](#), only five associations had more than 20 members, four with 10 to 20 members and the rest had less than 10 members.

In terms of target markets, the WPA's failed because they attracted large and medium size firms instead of smaller firms which tend to need more help in various export services due to their limited resources. The WPA's often lost their members because the larger firms have the resources but not the experience to export and their reliance on the WPA's is just temporary until sale volume reaches a level which eliminates the relative economies of scale advantage provided by the WPA's.

In terms of export organization, many WPA's failed because of disagreement among competing members about price setting and market allocation and because of poor management. By product, the WPA's failed because many export products tend to be differentiated in nature, rendering joint distribution unattractive to the exporters whose competitive edge may be built on differentiation. By net worth, the WPA's had a thin equity due to the low number of members; hence, it is practically impossible for them to have sufficient credit facilities to finance exports of their customers.

2. The WPA's failed also because of the traditional attitude of the US manufacturers. They use the WPA's just as a starter to test foreign markets and to build up sales. Once they have gained the experience and the sales volume needed to eliminate the economies of scale provided originally by the WPA's, the US exporters would rather "go it alone" and leave the WPA's for more control. Also, the WPA's had a hard time finding new members because US manufacturers and especially the smaller ones are reluctant to go international when they already have enough with the huge domestic market. Such "do-it yourself" and "why bother?" attitudes had hindered the growth and expansion of the WPA's tremendously.

3. Finally, the WPA's failed because of the vagueness and the restrictions found in the Webb-Pomerene Act itself. The Act failed to provide a legal basis for requiring the WPA's members to export through the association for a clearly prescribed period. While the Act

states a "reasonable" period of time, it is not clearly stipulated what period of time is reasonable. The Act also failed to prevent the WPA's members from selling their products to a competing domestic exporter. Furthermore, it is impossible for a WPA to create territorial rights to markets it has developed by requiring that any member's exports, after withdrawal from the WPA, be handled by or through the association. Lastly, the lack of clear cut definition of what export action by a WPA constitutes a violation of the antitrust laws prevents the WPA's from adopting a vertical integration of manufacturers, insurers, shippers and others in order to further take advantage of economies of scale instead of the traditional horizontal form of integration found among the WPA's.

## What's Wrong With the EMC's?

### EMC Characteristics

Currently, there are about 1,000 Export Management Companies (EMC's) in the US.\* They act as the export department of US manufacturers, marketing their products overseas along with other allied but noncompetitive product lines.

Most EMC's provide a wide range of services including market research, shipping, advertising, documentation, channel of distribution selection, exhibition at international trade shows, insurance, packaging and labeling advice and sometimes financing. In short, the EMC takes full responsibility for the export end of the business, relieving the manufacturer of all the headaches in doing it himself especially if it is the first time he wants to export his products.

The EMC's can either act as a commission agent for the manufacturers or as an independent distributor. The EMC which acts as a commission agent works under the name of the manufacturer. All correspondence, invoicing and literature are done with the logo and stationery of the US manufacturer which is represented. Most sales initiated by the EMC need the approval of its client company. Hence, the US manufacturers can control better the marketing of their products overseas especially when they maintain their own brand names. In return for the export services, the agent EMC receives a commission which is generally based on the invoice cost of the products being represented. The commission varies between 7.5% to 20% of the wholesale distributor price, depending on the product, the volume of business and the length of working relationship between the EMC and the manufacturer. In short, the EMC acting as a commission agent is just like an internal export department of its client manufacturer. The manufacturer invoices the foreign customer directly and carries any financing required.

The EMC acting as an independent distributor works on a buy-and-sell arrangement. It places the order with the manufacturer when an overseas order is received, pays cash to the manufacturer, resells the goods to the foreign buyers and invoices them directly. Normally, the

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\*US Department of Commerce, The EMC - Your Export Department, December 1979. Note that there are many terms used for independent exporters such as "export merchant", "combination export manager", or "export distributor", etc. ...These different terms refer more to the nature of the services performed or the contractual arrangements between the manufacturers and the export firms rather than to the character of the export firms themselves.

EMC buys at the domestic net wholesale prices less a percentage which approximately equals the manufacturer's domestic sale overhead. The EMC pays its overseas distributor or representative a commission and carries its cost of credit sales required by its foreign buyers.

#### Weaknesses of EMC's

Weaknesses of EMC's are found in the export firms themselves and also in their clients. The international marketing services provided by the EMC's, in general, lack depth because most EMC's tend to perceive themselves as merely the "export department" of their client manufacturers; hence, concentrating on services which do not represent a total international marketing product package needed by US manufacturers at all time. Beside shipping and sales functions, the EMC's could also provide comprehensive market research, planning and strategy development functions. The US manufacturers who plan to export need to know the changes that take place in various world markets, competitive moves, tariffs as well as nontariff barriers, new markets for existing and new products, licensing and joint-venture possibilities and many other integrated functions not available from most EMC's. Such lack of dynamism from the EMC's could be explained by the fact that most EMC's are very small with only one or two individuals owning and operating the firm.\* It is no wonder they fail to satisfy the needs of their clients in the long run due to lack of resources, limited knowledge of an extensive range of products and of world markets. As a matter of fact, most EMC's know very few countries first hand because very few have traveled overseas for direct personal contact and most sales are handled by correspondence with their foreign distributor.

EMC's fail to grow also because of their clients. The EMC's are most often seen only as an initial stepping stone by US manufacturers when they decide to penetrate the world markets and need to test them with a minimum level of risk at a reasonable cost. For this reason the EMC's are having the critical problem of losing their clients once sales success was achieved overseas. The EMC's face the same problem as the WPA's of the "go it alone" attitude found among the US manufacturers who desire to have more control of their brand name, market allocation, market penetration and who think that their unit cost of international marketing could be lower than the EMC's cost once overseas sale volume starts to reach certain level.

#### Lessons to be Learned

##### The Japanese ETC's

The Japanese ETC's are also known as "Sogo Shosha". There are currently around 6,000 ETC's in Japan with ten top ones and about a dozen medium sized ones.\*\* Sogo Shosha date back to the time of the Meiji Restoration in the mid-19th Century when Japan set out to become an industrialized country in order to modernize its armed forces. The importance of exports quickly

\*John T. Brasch, "Export Management Companies", Journal of International Business Studies, Spring-Summer 1978.

\*\*Data of this section is from the United States-Japan Trade Council, Japan's Sogo Shosha, Council Report No. 31, September 28, 1979.

became manifest as Japan needed foreign exchange to pay for modern weapons and machines. With the active encouragement from the Meiji leadership, Mitsui became the first Japanese ETC. The history of Sogo Shosha is filled with numerous mergers, take-overs and assimilations.

The top ten Sogo Shosha accounted for 56.4% of total Japanese exports between April 1975 to March 1976 and 55.6% of total Japanese imports during the same period. Hence, unlike the US Webb-Pomerene Association or Export Management Companies, the Japanese Sogo Shosha are far more diversified in their activities. They export as well as import an almost infinite variety of products and they do not deal only in the products of manufacturers they represent; frequently they establish their own subsidiaries or joint ventures into which they pour funds to come up with products to be marketed overseas as well as domestically.

Despite their multiple activities, the Japanese ETC's or "Sogo Shosha" act essentially as an intermediary to facilitate the flow of goods from the manufacturers to the buyers. As a facilitating intermediary, often the Sogo Shosha provide financial assistance to small and medium size manufacturers who have less access to commercial bank loans than larger ones. As shown on [Table 3](#), Sogo Shosha furnish financing to their customers on the order of billions of yen. Sogo Shosha provide also information and more importantly ideas to manufacturers to help explore unknown markets and they even develop existing markets for new products. Sogo Shosha's global information network is enormous. There are Sogo Shosha representatives in countries with which even the Japanese government does not have diplomatic relationship. As shown on [Table 3](#), each of the top ten Sogo Shosha has close to a hundred or more overseas offices with sometimes 1,000 staff members.

TABLE 3  
TOP TEN'S FINANCIAL SITUATION AND OVERSEAS OFFICES  
(September 1976, millions of yen)

Company	Loans From Banks	Loans to Companies	Net Profit	Japanese Overseas Staff	Overseas Offices
Mitsubishi	¥16,183	¥24,574	311	816	117
Mitsui	21,083	25,472	157	934	130
Marubeni	12,595	15,374	225	877	129
C. Itoh	11,157	13,025	178	631	119
SunItomo	7,412	10,194	187	680	123
Nisho-Iwai	7,305	11,051	148	646	117
Tomon	6,063	7,519	91	373	78
Kanematsu-Gosho	4,360	5,878	52	312	74
Ataka*	5,380	5,914	-61	210	53
Nichimen	3,849	4,634	64	415	86

Source: September 1976 Semiannual Statements of Accounts by the Companies and US-Japanese Trade Council, 1979

\*Because of losses, Ataka is being merged by Itoh

The total package of services provided by Sogo Shosha to the manufacturers are, therefore, more integrated and comprehensive and their economies of scale are incomparable. For this reason Japanese Sogo Shosha do not lose their customers as is the case with US Webb Pomerene Association and Export Management Companies.

The profit margin of Sogo Shosha are generally below one percent even for the top ten. Because of such low profit margin they tend to concentrate mostly in products like raw materials, textile, basic food commodities or steel that can be sold in bulk with high volume and they shy away from highly technological products which require parts sale services such as automobile and electronic products. For example, one of the top ten Sogo Shosha called Marubeni imports iron ore to

Japan from mines (which it helped finance) in Western Australia and export steel to Brazil.

Finally, each Sogo Shosha has an extended and tight relationship with other institutions such as banks. For example, Mitsui and Company, the general trading company, is a member of the Mitsui Group which is headed by Mitsui Bank. In fact there are today six such conglomerate groups which consist of a consolidation of banks and Zaibatsu affiliated companies including the Sogo Shosha shown as follows:

1. The Mitsubishi Trading Company of the Mitsubishi Group.
2. The Mitsui Trading Company of the Mitsui Group.
3. The Marubeni Trading Company of the Fuyo Group.
4. The Itoh Trading Company of the Daiichi Kangyo Bank Group.
5. The Sumitomo Trading Company of the Suimitama Group.
6. The Nissho-Iwai Trading Company of the Sanwa Bank Group.

#### The European ETC's

The European ETC's date back to the 16th Century when mercantilism led Europeans powers to establish colonies in order to bring about favorable trade balance by exporting more than import. A good example of how a European ETC grew is the Inchcape and Company Limited with headquarters in London and subsidiaries scattered throughout Asia, Africa and the Caribbeans. Inchcape handles a variety of activities today ranging from shipping, insurance brokerage, banking, assembly and distribution of motor vehicles, tea production and others.\*

Unlike the Japanese Sogo Shosha, the British ETC's grew by controlling end markets rather than manufacturers via forward integration of lighterage, insurance brokerage, warehousing and forwarding. For this reason they are organized by geographical area rather than by product and their overseas subsidiaries are highly autonomous, having their own entities. As a result, the British ETC headquarters are mainly a management concern with few employees.

#### US Model of ETC: A Proposal

Based on the above analysis of the existing US international channel of distribution via the WPA's and the EMC's and the review of the Japanese and British models of ETC's, it is conceivable that a US model of ETC can be developed. Although there has been no independent ETC found in the US yet, some US manufacturers have already tried the concept within their companies such as the Kaiser Trading Company which is part of the Kaiser Aluminum and Chemical Company or the Woodward and Dickerson Company which exports fertilizers, animal food ingredients, cocoa and tobacco products, cements, vegetable oils and many other products. A proposal to the development of an US model of ETC in this paper would focus on the characteristics required for a successful ETC, the attitude of its manufacturer clients and the environmental conditions needed to be provided by the US Government in order to promote US exports in the 1980's.

\*Collier, Shannon, Rill, Edward & Scott, Export Trading Company, Washington, D.C., 1977.

#### Characteristics of an "American ETC"

Basically, a successful "American ETC" must have three ingredients: 1) a total product catered to the right target markets at the right price; 2) an efficient organization for international distribution; and 3) the right attitude toward international marketing to be discussed in detail as follows:

1. A total product concept - Experience has shown that a successful ETC needs to provide a whole package of services which includes basic sales functions such as packaging, labeling, shipping, insurance, warehousing, pricing, market research and allocation, negotiation, financing and promotion to integrated international marketing planning and development programs which would help the US manufacturers to take advantage of new developments in various world markets, to introduce new products, to counteract competitive moves, to overcome tariff as well as nontariff barriers and so on.

A total product concept includes also imports besides exports. With two-way trade the American ETC can establish a better network of contacts in the foreign markets. Furthermore, coupled with an integrated set of functions, the two-way trade concept would help the economies of scale of the ETC; hence helping to reduce the cost of the US manufacturers when they rely on the ETC to export their products. Hopefully, the integrated and complete international marketing package provided by the ETC at a low cost would help to discourage the US manufacturer from "going it alone" once their overseas sales reach a certain level. Finally, by not losing its members but instead, by gaining additional members over time, the economies of scale can increase even further as is the case with the Japanese Sogo Shosha.

A given product package sold at a given price is "right" only for some given target markets. Based on the experience of the WPA's and EMC's, small and medium size firms would need more of the services provided by the ETC in the short run as well as in the long run because of their more limited experience and especially because of their limited resources as compared to larger firms. They would require an extremely high volume of sales overseas in order to reach an economies of scale which would outrun the ones provided by the ETC.

2. An efficient organization - Experience has shown that a successful ETC needs to know better its overseas markets and have more direct contacts by having more personal and direct relationship via the establishment of overseas offices. By having offices and personnel in each foreign market it deals with, the ETC can have an efficient network of information and communication as is the case of the Japanese ETC's. With overseas offices, the ETC can also match the changes and development of foreign markets in order to adequately advise its US manufacturers in their marketing mix design and planning.

The ETC needs also to be able to integrate its activities vertically as well as horizontally. Experience has shown that products with little or no brand identification and with competition based largely on price such as raw materials and commodities work better with horizontally integrated organization. With products that require brand name identification, a vertically integrated ETC appears to be more appropriate.

Finally, because of the need for control and autonomy traditionally found among US manufacturers, the British forward "market control" organization based on geographical division seems to be more appropriate for an



"American ETC" than the Japanese backward "manufacturer control" organization based on product line division. In fact, the market control approach to an American ETC organization not only helps to prevent the member manufacturers from leaving an ETC because they no longer fear to lose control but it also helps to build up their confidence because the ETC has better knowledge of the foreign geographical areas in which they are interested.

3. The "right" attitude - Owners and managers of an American ETC should not just consider their ETC as merely an "export department" of their manufacturer customers but should rather think of their ETC as an integrated international marketing arm of their customers providing basic sale services as well as a comprehensive total product package as discussed earlier in this paper. A successful American ETC needs to adopt a dynamic attitude in order to cope adequately with changes which constantly take place in various foreign market affecting the overseas sales of US exporters.

A successful American ETC needs also to allow a broad ownership or participation in order to build up equity needed for form the basis for credit financing made available to their customers. A "Why bother?" attitude about expanding would hamper the growth of the ETC as learned from experience.

#### Attitude of the US Manufacturers

A successful American ETC needs a large volume of business in order to take advantage of the economies of scale and to grow. In order to do so, it needs many participants and it especially needs to retain them over the long run.

The number of participants can be increased if more US manufacturers want to export. Many smaller firms cannot even meet the demands of the huge trillion dollar US market and as a consequence, they need special incentives to change their "why bother" attitude. Incentives are also needed to prevent the participant from leaving the ETC once their overseas sales have reached a certain level because they then decide to "do-it-ourselves."

#### Implications for US Trade Promotion Policy

As the US Government realizes that exports promotion becomes a "must", it needs to provide a proper legal framework and ambiance to promulgate the establishment of American ETC's and to promote their expansion. The Webb-Pomerene Act could be used as the legal framework by improving its clauses to include exports as well as imports by the ETC's and to allow them to integrate their activities as well as requiring their members to maintain their membership during a specific period of time such as five years or more. Any members which withdraw from the ETC's need to handle their exports by and through their respective ETC's anyway until the mandatory membership duration expires.

The US Government can provide some incentives to the US manufacturers which export through the ETC's such as tax reduction on income generated by such exports and easy access to credit financing facilities available at the Import-Export Bank.

With the above law and incentives, the US Government and more specifically the US Department of Commerce must educate the small and medium US manufacturers in order to inspire them to explore the possibility of exports as a profitable alternative.

#### Conclusion

In order to promote US exports in the 1980's, it appears that complete reliance on the existing channel of international distribution which consists primarily of the Webb Pomerene Associations (WPA's) and the Export Management Companies (EMC's) would be disastrous due to many problems which stem from the organization of those export firms, the "Why bother?" and "Do-it-yourself" attitude of the US manufacturers and the lack of an adequate legal framework which is needed to promote the expansion of a viable US export organization. Lessons of experience gathered from the Japanese Sogo Shosha and the European export trading companies (ETC's) indicate that it is conceivable to formulate an American model of ETC. To be successful, such American model of ETC requires a strong back-up from the US Government in order to provide incentives to US manufacturers to export and to do so through the ETC's. The government should also provide an adequate legal framework in order to promulgate the development and growth of US Export Trading Companies. The Webb Pomerene Act of 1918 could be amended and improved in order to allow the US ETC's to integrate vertically or horizontally and to include exports as well as imports for better economies of scale. Finally, it is even conceivable to make the American ETC a quasi-public institution in order to avoid anti-trust complications.

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## INFORMATION USE BEHAVIOR OF SMALLER NONEXPORTING FIRMS: AN EMPIRICAL STUDY

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### Abstract

Segmentation of nonexporting firms on the basis of export information gathering behavior is demonstrated. Empirical data regarding information gathering behavior is provided for the suggested segments. Policy implications derived are aimed at improved targeting of export stimulative information.

The study of the export behavior of firms has traditionally centered on firms already engaged in exporting (See Bilkey, 1978, for a review). Such firms were often contrasted with nonexporting firms in order to derive variables pertaining to the firm, its management or environment, that could explain why the former exported while the latter did not. Little attention has been devoted, however, explicitly to the nonexporting firm (Simpson and Kujawa, 1974). Specifically, few attempts have been made to develop meaningful segments or classifications of nonexporting firms that would allow a more efficient targeting of export-related information to such firms (Cavusgil, Bilkey and Tesar, 1979). Since the dissemination of such literature to nonexporting firms is an important part of governmental export stimulation efforts, it appears that efforts towards development of useful segmentation classifications of such firms deserves the attention of export stimulation research. This study will present a classification of nonexporting firms based on aspects of their information gathering behavior. Empirical data regarding the type of information collected and contacts made, information channel usage and information helpfulness perceptions will be provided for each segment. Policy implications will be derived from the findings aimed at improved targeting of export stimulative information to the nonexporting firm.

### Classifying Nonexporting Firms According to Interest In Receiving Export Related Information

Nonexporting small and medium sized firms may be conceived in varying interest, or need stages, regarding the receipt of export-related information. While some firms may be very interested or somewhat interested in receiving export related information, other may be totally indifferent. Interest may well reflect the readiness stage of firms, or of their decision maker, with respect to undertaking exporting activity. How ready firms are may in turn be viewed as resulting from an interaction of positively and negatively predisposing factors, "motivators," and "inhibitors," involving the management, the firm or its environment. Such factors have received extensive attention in the literature (Johanson and Vahlne, 1977; Wiedersheim-Paul, Olson and Welch, 1978). The existence of strong positive factors will tend to predispose the firm towards greater activity, or interest, regarding the collections of export information. Generally the more ready a firm is to export the more interested its management will be in seeking and receiving export-related information.

It appears reasonable to hypothesize that the more ready the firm, the more product or market specific will its informational needs be. Such needs will be

considered to be more urgent and management will be concerned with meeting them. In addition, the more ready (interested) the firm the more active it will be in searching for relevant information. The converse will be true for firms less ready to export. This study will attempt to shed light on these hypotheses.

Nonexporting firms are segmented in this study based on their reported interest in receiving export-information in the past. Interest centered on two groups of nonexporters, those interested in the past in receiving export information (high readiness stage) and those that were not interested (low readiness stage). The degree of utilization of sources of export information of these groups appeared to be of great interest as it could shed light on the hypotheses regarding the specificity of informational needs of different firms, as well as differences regarding urgency and consequentiality of informational needs. The behavior of these firms with respect to information collection or contact making, should shed light on the degree of initiative exhibited by such firms regarding these activities. Findings on the perceived helpfulness of information by the recipients is expected to shed further light on the needs of nonexporting firms and provide guidance to policy makers in choosing among various information distribution channels.

### Sample

A survey of small and medium sized exporting and non-exporting manufacturing firms in Maine was conducted in the summer of 1979. In addition to questions dealing with factors believed to either motivate or inhibit exports, firms were asked to respond to questions concerning their information gathering behavior. It was hypothesized that segmenting nonexporting firms on the basis of interest in receiving export-related information would allow a more efficient targeting of export related communications to such firms.

A systematic sample of 795 exporting and nonexporting small and medium sized firms were drawn from the 1978 Maine Marketing Directory, which provides a periodically updated census of manufacturing firms in Maine. Small and medium sized firms were defined as firms with up to 1000 employees. Three hundred and ten usable responses (104 from nonsubsidiary nonexporting firms) were returned; representing a response rate of 39 percent. The questionnaire had been pretested on a small sample of exporting and nonexporting firms. Instructions provided requested that the questionnaires were to be filled out by the top decision maker of the firm.

### Information Collection and Contactual Behavior

Table 1 presents a comparison between the information collection and contactual behavior of firms interested in receiving export information and those not interested. Interested firms, whether currently or in the past, engaged more heavily in export information collection as well as in contact making than noninterested firms. What is interesting is the extent of involve-

TABLE 1

## EXPORT INFORMATION COLLECTION AND CONTRACTUAL BEHAVIOR OF NONEXPORTING FIRMS DURING THE PRECEDING FIVE YEARS\*

	Interested Firms** N=24			Not Interested Firms N=69		
	currently	in past not now	never	currently	in past not now	never
	%	%	%	%	%	%
<u>Information collection concerning</u>						
Competitive products in foreign markets	16.7	29.2	54.2	0.0	4.4	95.6
Potential foreign customers	16.7	29.2	54.2	2.9	4.3	92.8
Foreign market conditions	16.7	29.2	54.2	1.4	4.3	94.2
<u>Making contacts with</u>						
Export middleman	20.8	33.3	45.8	1.4	0.0	98.6
Govt. agencies	8.3	25.0	66.7	1.4	1.4	97.1
Potential foreign customers	16.7	33.3	50.0	1.4	2.9	95.7

\*All differences between interested and not interested firms are significant beyond the .001 level.

\*\*Firms "somewhat interested" in receiving export information. Eleven firms "very interested" in receiving export information were not included in the analysis due to the small size of this group.

ment, or lack thereof. Over 90 percent of noninterested firms never engaged in information collection (which could involve passive receipt of unsolicited information) or contact making (which could involve more active behavior). This ratio declines to approximately 50 percent for interested firms.

Responses also indicate that firms tend to engage in comprehensive approaches regarding both collection and contacts. Firms which collected information did so regarding foreign products, customers and market conditions. Such firms appear to have made contacts regarding exporting as well. The use of a relative long time framework (the preceding five years) may however have obscured possible differences regarding information collection and contact making. No conclusive inferences can be drawn therefore from this data concerning more or less active information collection behavior of firms in different export readiness stages.

Both categories of nonexporting firms, whether interested or not, appear to have a higher proportion of active information collectors or contact makers in the past than at present. Why such firms discontinued their activities is not immediately apparent. They would, however, appear to make more desirable informational targets than firms which never received information or made contacts. In order of priority one should probably aim information dissemination efforts to, first, firms currently engaged in collection and contact making, then to those that did so in the past, and lastly to those that never did. The likelihood of moving such firms to active exporting appears to diminish in the same order. It appears important to stress that close to 50 percent of interested firms did engage in some form of informational activity regarding exporting, with most, if not all, having made contacts with export middlemen and potential foreign customers. Since these firms are not exporting, such contacts were not sufficient to lead to initiation of export activity. It would appear worthwhile to attempt to stimulate such firms to continue their efforts.

## Sources of Export Related Information

What sources of export information did nonexporting

firms, segmented by interest or readiness stage, utilize? If the source utilization of the two groups did not differ significantly for most information channels, the usefulness of classifying firms in the manner proposed here would be open to question. Findings on the utilization of various information channels are presented in [Table 2](#). To allow a comparison with exporting firms the sources utilized by the exporting firms in the sample were included as well.

The data indicate that there are significant differences between the groups regarding the most heavily utilized channels, such as the Federal Government, executive contacts and industrial associations. Both groups tend to underutilize similar channels, such as state government, banks and chambers of commerce.

What is surprising is the relatively heavy information channel utilization by interested nonexporters in comparison to exporting firms. Similarities exist here both as to the proportions of firms using such channels as the Federal Government, personal executive contacts and export agents, as well as the rankings reported for these groups. Regarding information channel utilization, interested nonexporters appear to be more similar to exporters than to nonexporters not interested in exporting.

Not interested firms utilized few channels to any appreciable degree, whether personal (executive contacts and export agents) or nonpersonal (all others). Governmental sources were somewhat more utilized by such firms, probably in a passive manner, such as through unsolicited receipt of information in the mail.

It appears therefore that interested nonexporters exhibited a more active search behavior (through personal executive contacts and export agents) than that shown by not interested nonexporters. The use of personal contacts results most likely from a higher "readiness stage" accompanied by qualitatively different informational needs. Since such firms have begun to commit some managerial resources (such as interest and time) to a consideration of the feasibility of exporting, the character of their informational needs could be expected to be of greater urgency and

TABLE 2  
PROPORTIONS OF NONEXPORTING AND EXPORTING FIRMS RECEIVING EXPORT RELATED INFORMATION DURING THE PREVIOUS FIVE YEARS

Significance*		Nonexporting Firms						Exporting Firms	
		Interested Firms**		Not Interested Firms		Differences		N=117	
		%	rank	%	rank	%	rank	%	rank
p ≤ .03	Federal government	50.0	1.0	23.9	1.0	26.1	2	55.6	2
N.S.	State government	16.7	5.0	20.9	2.0	4.2	7	37.6	4
N.S.	Chamber of Commerce	0.0	8.0	9.0	3.0	9.0	5	4.3	8
p ≤ .003	Industrial Associations	29.2	3.5	4.5	6.5	24.7	3	21.4	5
N.S.	Banks	4.2	7.0	3.0	8.0	1.2	8	12.8	7
p ≤ .000	Personal executive contacts	45.8	2.0	7.5	4.0	38.3	1	57.3	1
p ≤ .008	Export agents	29.2	3.5	6.0	5.0	23.2	4	39.3	3
N.S.	Other	12.5	6.0	4.5	6.5	8.0	6	19.7	6
p ≤ .000	No information received from any source	12.5		56.7		44.2		10.3	

\*Applies to the comparison of nonexporting firms only.  
 \*\*Firms "somewhat interested" in receiving export information. Eleven firms "very interested" in receiving export information were not included in the analysis due to the small size of this group.

TABLE 3  
PERCEIVED HELPFULNESS OF EXPORT INFORMATION RECEIVED BY EXPORTING AND NONEXPORTING FIRMS

	Nonexporting Firms				Exporting Firms	
	Interested Firms**		Not Interested Firms		N = 117	
	rated as helpful	percent of receivers	rated as helpful	percent of receivers	rated as helpful	percent of receivers
Federal government	9.1	16.7	4.6	18.8	5.1	9.2
State government	0.0	0.0	1.5	7.1	2.6	6.9
Chamber of Commerce	0.0	0.0	0.0	0.0	0.0	0.0
Industrial Associations	0.0	0.0	1.5	33.4	3.4	15.9
Banks	0.0	0.0	0.0	0.0	0.9	7.0
Personal executive contacts	18.2	36.4	3.1	40.0	26.5	46.2
Export agents	13.6	42.9	0.0	0.0	21.4	54.5
Other	4.5	33.4	0.0	0.0	9.4	47.7
No source useful	57.1		89.2		28.2	

<sup>1</sup>Percentages based on a small number of responses are subject to large random fluctuations and must be interpreted with caution.

\*\*Firms "somewhat interested" in receiving export information. Eleven firms "very interested" in receiving export information were not included in the analysis due to the small size of this group.

importance compared to that of non interested firms.

The expertise offered by export agents, and the cost involved in obtaining this expertise, will tend to "filter out" firms that have not advanced to the stage where the need for such expertise is recognized. A comparison with exporting firms reveals the importance of personal channels and the heavy reliance of exporting firms on personal information exchanges. However the first moves towards establishing such contacts are

likely to be made earlier. Further research is needed on this issue as well as to the degree of active or passive information collection by different segments of nonexporting firms. The data presented here can only provide clues in this regard.

Industrial associations represent an important source of information for interested nonexporters and for exporters but not for not interested nonexporters. The use of this channel may again be tied to a relatively



higher readiness to export stage, as the information likely to be obtained from industrial associations will tend to be product or market specific. Further research is needed however to verify whether firms are in fact likely to move from the utilization of more general information sources to those sources providing more specific information as their interest in exporting grows. Findings in this regard could have important policy ramifications in achieving the aim of supplying the most needed and useful information to firms according to their stage of export readiness.

It is interesting to note that close to 50 percent of not interested firms did receive some export information from some source, with this proportion rising to almost ninety percent among the more interested firms. Subtracting the proportions of firms who received product/market specific information, which was presented in Table 1, we can conclude that about 45 percent of both not interested and interested nonexporting firms received export information of a general nature at one time or another. Therefore it is apparent that information is reaching the nonexporting firm. What is the perceived usefulness of this information however? Answers to this question appear crucial to any attempt to assess the effectiveness of export information supplied to nonexporters.

#### Perceived Helpfulness of Export Related Information

Data on the perceived helpfulness of export information received by nonexporters is supplied in Table 3. Data on exporting firms has been added to allow comparisons.

An examination of the data reveals that while a relatively small proportion of not interested nonexporters found the information received helpful, the proportions of receivers of information finding the information helpful were in many cases higher for not interested than interested nonexporters. However, since relatively few interested nonexporters are involved here, these findings should be considered tentative.

One would have expected that firms in more advanced readiness stages would similarly be in a more advanced "problem recognition" stage. That is, they would be facing, or recognizing problems of more consequence to the firm, requiring more immediate managerial attention than previously. They may now, as was hypothesized earlier, as well be looking for more specific answers to more specific problems. The urgency, specificity and gravity of export related problems faced by not interested exporters were, on the other hand, presumed to be rather low. It may have been reasonable therefore to expect higher helpfulness ratings from firms in more advanced problem recognition stages, if the desired information had been supplied to these firms. This appeared not to be the case.

Not surprising, on the other hand, were the findings regarding the helpfulness of personal versus nonpersonal channels, with export agents being found more helpful than personal executive contacts. Using a problem-solving capability criterion expert advice offered by export agents may indeed be expected to be perceived as more helpful in solving export related problems than information obtained from less expert, though probably experienced, sources. For information receiving not interested firms, the less specific, problem oriented approach of governmental export literature appeared to be more helpful than to either of the other groups. Again, the small number of firms involved allows for only tentative inferences to be drawn from the findings.

Efforts to design more effective and cost efficient communications regarding exports and delivery channels for such communications may benefit from the analysis of the data presented. Random dissemination of information to firms in an indiscriminate fashion will clearly be wasteful. Nonexporting firms, as well as exporting firms, appear to have different informational needs and channel utilization patterns depending on the stage of readiness stage to export. This research has identified two such stages, the "interest" and the "no interest" stages. The data presented in Table 2 appears to support the notion that firms in a more advanced interest stage engage in a more active as well as information specific search behavior than less interested firms. Such firms appear likely to more heavily utilize personal communication channels, or nonpersonal channels providing more specific information, e.g., industrial associations. This pattern appears to indicate a need for careful targeting of export related product/market information. The need for more specific information for firms at higher stages of readiness should be met preferably through flexible (personal) channels. The provision of more general or nonspecific information should be deemphasized for this segment.

The not interested segment, proportionately the largest segment of the overall nonexporting population appears to receive relatively little export information. Should greater efforts be made to reach such firms? The information on channel usefulness appears to suggest that a relatively high proportion of those that did receive information found it helpful. It may be desirable however to attempt to subdivide not interested firms further in order to increase the usefulness of the information to larger proportions of the segment.

Policy makers will have to carefully consider the "helpfulness quotient" of the export information they supply. It clearly makes little sense to continue to supply information which a majority of recipient firms find irrelevant or not helpful to successful undertaking of export activity.

The order of priority of dissemination efforts suggested by the data calls for directing information first to the interested firms, and among them, to those firms currently collecting information or making contacts. Through periodic surveys such firms could be readily identified and characterized. Nonpersonal information currently provided to such firms appears to have little usefulness to their problem solving activities. Increasing the relevancy of information to the problem solver through increased product/market specificity may be a desired improvement since, as was pointed out, close to 45 percent of interested firms appear to have received nonproduct/market specific information. In view of the considerable informational efforts expended by the Federal Government, achieving improvements in usefulness ratings appears to be an area requiring urgent attention.

In order to achieve more precise targeting, the varying needs of interested firms (such as those of firms currently collecting information and those that did so in the past) should be surveyed and monitored, preferably at regular and frequent intervals, and information should be designed to fit these needs. Where feasible, governmental export stimulating efforts should be channeled through personal channels, such as experts, retired executives with export experience, and the like. The enhanced effectiveness of these channels is clearly indicated by the sample data for all groups of firms. Many interested firms, with proper guidance and

assistance, may well continue to proceed successfully toward exporting if provided with the right kind of information.

Properly executed export stimulation policy will be aimed at moving as many nonexporting firms as appear likely to succeed in exporting to higher "interest" stages, through the provision of specifically needed information, using a mix of personal and well targeted nonpersonal channels. Clearly, efforts to provide useful information must continue beyond this point as firms must be assisted in their efforts to gain positive export experience. Indeed, attempting to prevent or overcome early export failures appears to be a significant goal for policy makers following the firm's entry into exporting. This however is beyond the scope of this paper. The focus here has been on the initial pre-export stages leading up to serious commitments to exporting. Proper tailoring of the information and its delivery appear to be a worthy aim of export assistance agencies.

### Conclusions

It appears that nonexporting firms may be usefully segmented in order to bring about a more efficient targeting of export stimulating communications. Such firms were segmented according to expressed interest in the receipt of export related information. Significant differences regarding utilization of information channels, type of information collected and contacts made, and perceptions regarding information usefulness were found between the firm groupings. Limited support was found for hypotheses regarding types of informational needs (more urgent and product/market specific) and activity patterns (more active) the higher the export readiness of the firm. Policy implications that can be drawn from the data point to the desirability of focusing information provision efforts on firms indicating interest in receiving export related information, and having a current or past interest in exporting. Such information should be relevant to the industry and market needs of such firms and should be specific in nature. To the extent that efforts in information provision are made for not interested firms, information of a general nature concerning exporting should probably be provided. The aim of this information should be to move such firms to a higher state of export readiness. Personal channels, whether those utilizing experts or peer executives with export experience, appear more useful to users than nonpersonal channels, and should be utilized to the greatest degree feasible. Further research is needed to ascertain the specific needs of nonexporting firms using some suitable framework for segmentation purposes. This would allow more efficient information provision to nonexporting firms, leading more such firms to proceed to active exporting.

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A STUDY OF THE PERCEPTIONS OF SELECTED SMALL  
MASSACHUSETTS MANUFACTURERS TOWARD EXPORTING

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Abstract

The authors investigated the perceptions toward exporting of small, high-technology Massachusetts manufacturers. The hypothesis tested was that exporters do not differ from non-exporters in their perceptions of such factors as risk, profit potential, costs, problems, and personal rewards. Results however, suggested that the two groups do differ in their perceptions toward exporting.

Introduction and Purpose

Virtually every corporation is an active exporter. However only one percent of U. S. companies, the big multinationals, account for 85 percent of all U. S. exports ("The Reluctant Exporter," 1978). The involvement of smaller U. S. enterprises in export activities is much less pronounced. Eugene Lang, president of Resources and Facilities Corporation of New York City, has estimated that there are 250,000 U. S. manufacturers in the small-business category that are not exporting and have no export objectives or programs for developing overseas markets. For many of these firms, exporting is a major untapped opportunity (Keegan, 1980).

Why are these small firms so reluctant to export? Several reasons are generally given: lack of enterprise, high costs, too much paper work, excessive competition, and so on. But there is another factor that could be the real source of objection to exporting: the perceptions of decision makers of firms engaged in exporting toward such factors as risk, profit potential, costs, problems, and personal rewards differ from the perceptions of decision makers of firms not engaged in exporting.

The purpose of this paper is to examine the role of decision-maker perception in the export decision.

Hypothesis

The hypothesis tested was: The perceptions of decision makers of firms engaged in exporting toward such factors of exporting as risk, profit potential, costs, problems, and personal rewards do not differ from the perceptions toward these factors of the decision makers of firms not engaged in exporting.

Method

Subjects

A convenience sample of decision makers from fifty-nine small, high technology Massachusetts companies was selected. The firms were located in Worcester, Cambridge, Boston, Everett, and the greater Springfield area. The principle products of these companies fell into six SIC groups: 28, Chemicals and Allied Products; 34, Fabricated Metal Products Except Machinery and Transportation Equipment; 35, Machinery Except Electrical; 36, Electrical and Electronic Machinery, Equipment and Sup-

plies; 37, Transportation Equipment; and 38, Measuring, Analyzing, and Controlling Instruments.

The decision maker responsible for deciding whether or not his company will export was personally interviewed and asked to complete a personal data sheet and an "Opinions of Exporting" questionnaire (Table 1). All were high-ranking officials; for example, 24 of the 34 officials with exporting companies were presidents. Sixteen of the 25 officials with non-exporting companies were also presidents.

The exporters and non exporters were similar in other respects. The average age of all exporters was 49.5 years while the average age of the non exporters was 48.9 years. The educational level achieved by the exporters was 16.3 years, compared with 15.8 years for the non exporters. Half of the exporters and sixty-four percent of the non exporters indicated some foreign language proficiency. All except two of the decision makers had traveled outside of the United States.

During the course of the interviews, seven exporters were found who did not really appear to be interested in exporting. Often they were exporting only because of pressure from one of their large American customers, and they explained that exporting was a nuisance which they would avoid if they could. These seven were labeled "non-committed exporters" while the other twenty-seven who actively sought export business were called "committed exporters." Although the classifications were subjective, they proved interesting in the analysis--at times, the non-committed exporters appeared to act as exporters and at other times, as non exporters.

TABLE 1  
OPINIONS TO EXPORTING QUESTIONNAIRE

1. Exporting is very risky. I'd rather go to the racetrack. Then at least I could have a good time while I lost my money.
2. Essentially exporting is not different from selling in the domestic market.
3. Exporting is very difficult because the most desirable markets have high tariff barriers.
4. Products utilizing new or advanced technology are easier to export than are products using older and more simple technology.
5. I look on exporting as a real challenge to my managerial capabilities.
6. A small firm is at a great disadvantage in exporting because of limited capital.
7. If we export, I would expect that overseas agents would be readily available to handle our products.
8. The paperwork involved in exporting is too complicated and expensive for our company.
9. The Commonwealth of Massachusetts does nothing to help increase exports.
10. Knowledge of the language of a country is important in exporting to that country.
11. The complications of ocean shipping are so great that exporting is not a worthwhile venture for a small company.
12. It is necessary to change our product specifications for various export markets.

13. I don't speak any language but English and therefore would be reluctant to try and get into the export business.
14. The political instability in the world makes it very risky to engage in export business.
15. We are at a disadvantage when compared to European exporters because they receive tax rebates on their exports.
16. The multinationals have ruined the export business by opening plants in most of my best potential markets.
17. Exporting is not as rewarding as dealing with my domestic customers.
18. Exporting is a good way to compensate for excess production capacity.
19. The U. S. President talks about wanting to increase exports, but the government does nothing to help me in this regard.
20. I would like to export, but I don't know where to go for help.
21. Foreign travel is advantageous in getting into the export business.
22. Export business is a nuisance and should therefore provide an extra margin of profit when compared with domestic business.
23. We must start exporting now if our company is going to continue to grow.
24. Exporting is a very viable method of increasing sales for a small company.
25. Exporting is difficult because it is hard to check credit references in foreign countries.
26. A domestic international sales corporation, (DISC), is a big help in increasing the profitability of our export business.
27. Exporting gives me a chance to travel and meet people I could never meet in any other way.
28. The government is only interested in big business. Its programs to aid exports, such as DISC, are geared to the large corporations and are too complicated and expensive for a small company.
29. Participation in a trade fair is a good way to start or to expand an export market.
30. The company with a manager who had formal training in international business can do a better job in exporting.
31. The advent of the European Common Market has made exporting to Europe a very difficult process.
32. Exporting offers significant opportunities for increased profits.
33. If we export, we will have to wait a long time for our money.
34. We are at a disadvantage when compared to European exporters because they have government sponsored credit insurance.
35. Exporting is difficult because many of our products are more expensive than foreign products.
36. I feel that the contacts I could make in exporting would give me a better understanding of the problems of the world.
37. Exporting means extra problems because we must add people with special expertise.
38. We have all the domestic business we can handle, and therefore, I am not interested in exporting.
39. There is a large potential market for our product in foreign countries.
40. Exporting is only for larger firms.
41. The U. S. Department of Commerce has a number of good programs to help small business get into exporting.
42. Exporting offers me a management specialty that I feel could help solidify my position with the company.
43. Foreign exchange problems make exporting difficult.
44. Exporting could be a profitable outlet for our product.
45. If a small firm tries to go into exporting, it will find that its available executive talent will be spread too thin, and the company's overall performance will suffer.
46. We plan to increase the percentage of our product exported every year in order to attain our desired growth rate.
47. The extra volume which comes through exporting allows a company to implement many production efficiencies.
48. College trained marketing executives are necessary if a company is considering entering the export market.
49. Since exporting means doing business under many different laws, this increases the complexity of management's problems to the point where it is inadvisable for a small company to consider selling outside of the domestic market.

#### Data Analysis and Limitations

Table 2 shows the results of the data analysis. Data were analyzed using the Kolmogorov-Smirnov two sample, one-tailed test of significance. Each of the forty-nine statements was treated as a separate hypothesis. The null hypothesis was that there is no difference between the perception of the exporter and the non exporter for the view expressed by that particular statement. Also, because of the appearance of the non-committed exporter, a second test was made comparing the committed exporter with the non-committed exporter and the non exporter.

It is well to point out that since a convenience sample was used in this study, the results cannot be generalized to a wider population. However, this area of research is still largely unexplored, and this study is a preliminary one. While the results cannot be generalized, they do indicate some interesting possibilities which should be explored with further research.

TABLE 2  
SIGNIFICANCE LEVELS OF STATEMENTS  
BY RESPONDENT CATEGORY

Variable	All Exporters vs. Non Exporters	Committed Exporters
		vs. Non-Committed Exporters and Non Exporters
3. High tariffs	.025	----
4. New technology	.025	.005
9. Massachusetts' help	----	.010
13. Language spoken	.010	.025
14. Political instability	.010	.005
16. Multinational plants	----	.005
17. Personal rewards	.050	.025
22. Profit margins	----	.050
23. Export for growth	.001	.001
24. Increased sales	.050	.050
28. Government programs	----	.010
36. Contacts made	.025	----
38. Domestic business	.001	.005
39. Market potential	.001	.005
40. Larger firms	.010	.025
42. Management specialty	----	.025
44. Product overlook	.010	.001
45. Executive talent	.050	.050
46. Product percentage	.005	.005
49. Different laws	.025	.010

## Results and Discussion

As shown in Table 2, fifteen of the forty-nine statements were significant at the  $p \leq .05$  level of significance when exporters were compared to non exporters. Eighteen statements were significant at the  $p \leq .05$  level when committed exporters were compared with non-committed exporters and non exporters. Therefore, the data suggested that exporters do differ in their perceptions toward exporting. Each of the significant statements is discussed below:

Statement 3: Exporting is very difficult because the most desirable markets have high tariff barriers. This statement was significant for all exporters versus non exporters but not for committed exporters versus non-committed exporters and non exporters. The explanation here appears simple. Those engaged in exporting, whether committed or not, know what the tariff situation is. For the non exporter, it is a fear of the unknown.

Statement 4: Products utilizing new or advanced technology are easier to export than are products using older and more simple technology. This statement was significant for both groups. Using the theory of comparative advantage, the textbook answer to this question would be to strongly agree. In all of the groups more than fifty percent did agree with the statement. However, the non-committed exporters and the non exporters agreed more strongly than did the committed exporters. This would tend to support the theories of this study. While the non-committed exporters and the non exporters tend to accept "general knowledge," the committed exporter is not necessarily convinced. Perhaps by using an extra marketing effort, the committed exporter is able to easily compete in the export market with a product which does not utilize the newest technology.

Statement 9: The Commonwealth of Massachusetts does nothing to help increase exports. This statement was significant for committed exporters versus non-committed exporters and the non exporters tended to disagree with this statement more than the committed exporters did.

Statement 13: I don't speak any language but English and therefore would be reluctant to try and get into the export business. Both groups disagreed with the statement, but the exporters tended to disagree with it more. Several of the committed exporters stressed the fact that in most countries the knowledge of English among their customers was high and that many of these people preferred to do business in English even when the American spoke the customer's language rather fluently.

Statement 14: The political instability in the world makes it very risky to engage in export business. This statement was significant for both groups and was another example where the non-committed exporter behaved more like a non exporter.

Statement 16: The multinationals have ruined the export business by opening plants in most of my best potential markets. This was significant for both groups. The non-committed exporter again behaved more like a non exporter and expressed a protectionist fear of "unfair" overseas competition.

Statement 17: Exporting is not as rewarding as dealing with my domestic customers. This statement was significant for both groups. It was an attempt to arrive at some measure of the personal rewards and achievements in exporting, and once again the non-committed exporter

was grouped more closely with the non exporter than the committed exporter.

Statement 22: Export business is a nuisance and should therefore provide an extra margin of profit when compared to domestic business. The non-committed exporter was more closely aligned with the non exporter than with the committed exporter. During interviews, many of the committed exporters said that the profit on exports tended to be somewhat higher than their domestic profits but that this was because of market demand conditions. Most of them also expressed the willingness to operate on lower than normal profit margins in their export markets when the market conditions seemed to require it.

Statement 23: We must start exporting now if our company is going to continue to grow. As might have been predicted, the non exporters disagreed and were generally content to serve the domestic market.

Statement 24: Exporting is a very viable method of increasing sales for a small company. The non exporter showed no interest in the export market, presumably because he perceived the problems as much too great for any possible benefits he might receive.

Statement 28: The government is only interested in big business. Its programs to aid exports, such as DISC, are geared to the large corporations and are too complicated and expensive for a small company. This is another example of the non-committed exporter behaving more like the non exporter.

Statement 36: I feel that the contacts I could make in exporting would give me a better understanding of the problems of the world. Interestingly, the non exporters tended to agree with this statement more than the exporters, who were more or less unified this time. Apparently the exporters have found that most of their foreign travel is spent in talking business, and so they have little time to worry about the world's problems.

Statement 38: We have all the domestic business we can handle, and therefore, I am not interested in exporting. In this case the exporters tended to behave as a unified group whereas the non exporters showed their fear of the problems of exporting and their general disinterest in exporting.

Statement 39: There is a large potential market for our product in foreign countries. The exporters appeared as a more or less unified group once more, while the non exporters saw no great export market available to them.

Statement 40: Exporting is only for the larger firms. The exporters appeared again as a unified group, and the non exporters accepted the standardized excuses for not exporting.

Statement 42: Exporting offers me a management specialty that I feel could help solidify my position in the company. The non-committed exporters answered more like the non exporters, and both groups generally disagreed with the statement which was intended as a measure of personal advancement. It apparently failed as a good measure because so many of the decision makers had a substantial financial interest in their company that their position was secure whether the firm exported or did not export.

Statement 44: Exporting could be a profitable outlet for our product. The non-committed exporters once again appeared to be more closely aligned with the non

exporters than with the committed exporters as they perceived greater problems in exporting than did the committed exporters.

Statement 45: If a small firm tries to go into exporting, it will find that its executive talent will be spread too thin, and the company's overall performance will suffer. In this case, all of the exporters tended to agree with each other and did not see this as a problem, while the non exporters saw it as a definite problem.

Statement 46: We plan to increase the percentage of our product exported every year in order to attain our desired growth rate. The exporters as a group tended to agree with the statement more than the non exporters did. The non exporters obviously felt that their desired growth could be obtained by other means.

Statement 49: Since exporting means doing business under many different laws, this increases the complexity of management's problems to the point where it is inadvisable for a small company to consider selling outside the domestic market. In this case also, the non-committed exporter behaved more like the non exporter, seeing as major problems matters which the committed exporter treated as routine.

#### Policy Implications

This study suggests that there is a difference in the way that exporters and non exporters perceive the factors of risk, profit potential, costs, problems, and personal rewards of exporting. Fifteen of 49 statements on the "Opinions of Exporting Questionnaire" were significant at the  $p \leq .05$  level when exporters were compared to non exporters. Eighteen statements were significant at the same level when committed exporters were compared with non-committed exporters and non exporters. The study also found very little difference in the demographics of the decision makers of the exporting and the non-exporting companies.

Two main policy implications emerge from this study. First, demographic profiles of exporters and non exporters will not sufficiently account for differences between the two groups. An in-depth analysis of their perceptions is also needed when developing programs to increase exports. It is no longer a matter of giving out facts and information regarding exporting practices. Instead it is necessary to change the decision maker's attitudes. Second, any programs developed by change agents to increase exporting should address non-committed exporters and non exporters as one group. The non-committed exporters are unwilling exporters, and until their perceptions toward exporting are changed, they will do as little exporting as possible.

This was an exploratory study, and as such its main purpose was to break the ground for further research. Although study results cannot be projected on a national basis, they provide an interesting basis for future studies using either regional or national samples.

#### References

Warren J. Keegan, Multinational Marketing Management (Englewood Cliffs, NJ: Prentice Hall, 1980), p. 412.

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THE DECISION TO DISCONTINUE EXPORTING:  
THE EXPERIENCE OF THE SMALLER MANUFACTURING FIRM IN THE  
SOUTHEASTERN UNITED STATES

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Abstract

A survey of the export experience of a random sample of 124 small and medium-sized manufacturing firms produced a group of 21 firms that had discontinued export activity. This article compares the attitudes of the chief executive officers of these firms with those of the non-exporting and the currently exporting firms to seek insight into the difficulties involved in stimulating increased export activity. Perceptions of risk, profit and cost involved in exporting are contrasted, with cost perceptions appearing to be the critical variable. This suggests that "how to" export development programs fail to meaningfully address the behavioral element of the export/no export decision.

Introduction

The growing concern for the continuing problems the United States has with its balance of payments often gives rise to the belief that expanded small and medium sized firm export activity is one possible solution. This belief is underscored in testimony before the U.S. Congress, where numerous export expansion programs are being considered (U.S. Senate, 1978) which would stimulate export activity in the smaller-sized manufacturing firm.

In order to provide this stimulation through legislation, a better understanding of the chief executive officer (CEO) perceptions of certain factors critical to the export decision must be developed. Too often, remedies are sought in the absence of sufficient information upon which to base sound policy development. The result is, frequently, the formulation of policies which do not produce the desired result.

To develop specific information on current business attitudes toward the export issue, a research study of cost, profit, and risk perceptions in export marketing as contrasted to domestic marketing was conducted in the Southern United States. Initiated under the auspices of the Georgia World Congress Institute,\* the purpose of the study was to evaluate CEO attitudes relative to export activity.

Research Methodology

Interview studies\*\* were conducted among 124 small and medium-sized manufacturing firms (less than 500 employ-

\*The Georgia World Congress Institute is a non-profit research and educational institution of the Georgia University System administered by Georgia State University, College of Business Administration, and the Georgia World Congress Authority.

\*\*A formal interview schedule was used in interviews. However, the actual interview was in the main free-form to allow for the collection of spontaneous information. Responses to questions related to export risk, cost, and profit perception were recorded on a seven point ordinal scale for future statistical analysis.

ees) in the Southern United States. A frequency distribution of the firms interviewed by state is shown in Table 1.

Of the firms interviewed, 59 (47.6%) were currently \*\*\* engaged in export activity, and 65 (52.4%) were not. The firms that were included in the study were selected at random from the various directories of manufacturers on the basis of export potential, and not on the basis of whether the firm was listed as being currently involved in export activities. Of the 65 firms classified as non-exporters, 21 had prior export experience, but had discontinued this activity.

The 21 firms that had made a decision to discontinue export activity were not purposely included in the sample. They were included during the normal course of selecting the random sample. These 21 firms represent 32.3 percent of the firms classified as currently non-exporting. This is a rather significant percentage of firms to discover in a small sample. Therefore, this leads to the following questions:

1. What was different about the export experience that might have caused the CEO to decide to discontinue export activity? Was perceived risk too great vis-a-vis selling the product in the U.S.? Were costs too high? Were profits too low?
2. Did some specific event occur that caused the CEO to discontinue the export activity?
3. Does the CEO need more support from government or other agencies to continue export activity?

TABLE 1  
FREQUENCY DISTRIBUTION OF FIRMS INTERVIEWED  
(BY STATE)

<u>State</u>	<u>Number of Firms</u>	<u>Percent of Total</u>
Texas	10	8.0
Florida	26	21.0
South Carolina	14	11.3
Alabama	14	11.3
Georgia	<u>60</u>	<u>48.4</u>
TOTALS	124	100.0

The Discontinued Exporter: A Comparative Analysis  
of CEO Perceptions of Risk, Cost and Profit

For purposes of analysis of the rationale of the discontinued exporter, the attitudes of CEO's with respect

\*\*\*Hypotheses were used that indicated CEO attitudes related to export risk and cost perceptions were higher in currently non-exporting firms than in currently exporting firms. Further, a hypothesis was formulated that export profit perception of the CEO was greater in the exporting firm than in the non-exporting firm. Frequency distributions and statistical tests of the hypotheses were calculated using SPSS and the Kolmogorov-Smirnov two-sample non-parametric test.



to perceived export risk, cost, and profit of the three basic groups studied--the current exporter (59 firms), the current non-exporter with no prior export experience (44 firms), and the current non-exporter, but with prior export experience (21 firms)--are compared. In the case of the current exporting firm (X) and the current non-exporting firm with prior exporting experience (NX/P), comparison of perceptions is made on a pre and post-export basis. In the case of the current non-exporting firm with no prior export experience (NX), comparisons with the discontinued exporter obviously can only be made on a pre-export experience basis.

Table 2 compares the response to the perceptions of risk prior to any export experience for the three basic groups studied. The NX/P firms tend to rank the risk factor in exports as being fairly high compared to the other groups with 18 (or 86%) reporting in the "moderately greater to considerably greater" category (5-7 range Lickert Scale). For X firms, about one-half (31) viewed risk in this range; 24 NX firms (about 55%) placed risk in this same range.

It follows that those which have chosen to discontinue exporting could hold a more conservative view on the

TABLE 2  
COMPARISON OF RISK PERCEPTION BETWEEN EXPORTING AND NON-EXPORTING FIRMS WITH PRIOR EXPORT EXPERIENCE<sup>1</sup>

Risk Perception <sup>1</sup>	Non-Exporting Firms with Prior Export Experience				Exporting Firms				Non-Exporting Firms	
	P <sub>1</sub>	%	P <sub>2</sub>	%	P <sub>1</sub>	%	P <sub>2</sub>	%	P <sub>1</sub>	%
0	---	---	---	---	1	1.7	---	---	---	---
1	---	---	1	4.8	---	---	---	---	1	2.3
2	---	---	---	---	1	1.7	3	5.1	1	2.3
3	2	9.5	2	9.5	7	11.9	13	22.0	4	9.1
4	1	4.8	6	28.6	19	32.2	28	47.5	14	31.8
5	8	38.1	6	28.6	12	20.3	10	16.9	8	18.2
6	4	19.0	2	9.5	7	11.9	2	3.4	7	15.9
7	6	28.6	4	19.0	12	20.3	3	5.1	9	20.5
TOTALS	21	100.0	21	100.0	59	100.0	59	100.0	44	100.0

Notes: 1. Risk measured by exports versus domestic sales.

2. P<sub>1</sub>=Perception prior to undertaking to export; P<sub>2</sub>=Perception after gaining export experience.

Perception Key: 0 - Don't know  
1 - Considerably less than domestic  
2 - Less than domestic  
3 - Moderately less than domestic

4 - Same as domestic  
5 - Moderately greater than domestic  
6 - Greater than domestic  
7 - Considerably greater than domestic

question of the risk factor in exporting than would the other firms. However, when examining the *post export* experience of both the NX/P and X firm, one notes a definite moderating trend in perception of risk. For the NX/P group there is a considerable increase in the number of firms placing risk in the "same as domestic sales" to "moderately less than domestic sales" category, (3-4 range on the Lickert Scale). This corresponds with a similar shift in attitude on the part of the X firms.

It may be deduced from this that the decision to discontinue exporting is not directly linked to risk perception remaining at the higher level *after* the export experience. \* Comparing favorably with the same pattern

\*Earlier studies corroborate that risk associated with exporting often does not appear significant to the export/no export decision. See Paul O. Grobe and J. R. Kreidle, "Export! Why, or Why Not? Managerial Attitude and Action for Smaller Sized Business Firms," *Business Review*, 27 (Winter, 1968), 47-49; U.S. Senate, esp. p. 253; and H. Ralph Jones, "A Study of Industry Attitudes Toward Exporting," *Southern Ohio/Kentucky Export Council*, September, 1979. The difficulty of accurately assessing views on risk related to exporting stems, in part, from varying definitions being applied. Typically, "risk" is equated with the "fear of not being paid." This study found that only one firm had not been able to collect. From the nature of responses in other studies (noted above), it is clear that defaults on accounts receivable occur less frequently than anticipated.

of change in those firms that continue to export, risk perception does not appear to be a key factor.

A comparison of the perception of the *costs* involved in exporting is contained in Table 3. Virtually all of NX/P and the NX firms place perceptions of cost in the "same as domestic" to "considerably greater than domestic" categories (4 to 7 on the Lickert Scale). The majority of X firms (with 90% reporting in the same range) view the cost factor in a similar vein.

Some minor differences appear in the upper range of the scale. Almost 80% (35) of the NX firms view costs in the conservative range (5 to 7). Only one-half (10) of the NX/P firms rank the cost factor similarly. The X firms also appear somewhat more conservative in this regard with 76% (45) ranking it at the upper end of the scale. On a post-export experience basis, the NX/P firms show a slight moderation in the perception of the cost of exporting. For the X firms, there is a considerable shift to a more moderate view. The significance of the perception of cost in the decision to discontinue export activity is not entirely clear from study results. The slight moderation in the pre and post-export experience of the NX/P firms suggests that, for most, the cost differential for export *vis-a-vis* domestic sales remains higher. Hence, it is a factor that influences any decision whether to continue. Conversely, for the majority of X firms, export cost experience proves quite favorable. Their resolve to remain in export activity is most probably enhanced.

With respect to the issue of profit perception, Table 4

TABLE 3  
COMPARISON OF COST PERCEPTION  
BETWEEN EXPORTING, NON-EXPORTING, AND NON-EXPORTING FIRMS WITH PRIOR EXPERIENCE

Perception: Export vs. Domestic Sales	Non-Exporting Firms with Prior Export Experience				Exporting Firms				Non-Exporting Firms	
	P <sub>1</sub>	%	P <sub>2</sub>	%	P <sub>1</sub>	%	P <sub>2</sub>	%	P <sub>1</sub>	%
0	---	---	---	---	2	3.4	---	---	---	---
1	---	---	---	---	---	---	1	1.7	---	---
2	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	2	3.4	6	10.2	1	2.3
4	11	52.4	11	52.4	10	16.9	23	39.0	8	18.2
5	4	19.0	6	28.6	29	49.2	23	39.0	15	34.1
6	3	14.3	2	9.5	7	11.9	2	3.4	11	25.0
7	<u>3</u>	<u>14.3</u>	<u>2</u>	<u>9.5</u>	<u>9</u>	<u>15.3</u>	<u>4</u>	<u>6.8</u>	<u>9</u>	<u>20.5</u>
TOTALS	21	100.0	21	100.0	59	100.1	59	100.1	44	100.1

Perception Key: 0 - Don't know  
1 - Considerably less than domestic  
2 - Less than domestic  
3 - Moderately less than domestic  
4 - Same as domestic  
5 - Moderately greater than domestic  
6 - Greater than domestic  
7 - Considerably greater than domestic

shows the varying attitudes of three groups. There is a high correlation between NX/P and X firms prior to the export experience. The majority of NX/P firms (15, or 72%) and X firms (48, or 82%) anticipated profitability of export activity to be in the "same as" to "moderately greater than domestic sales" categories (4 to 5 range in the Lickert Scale). The NX firms adopted a more conservative view with the majority (27, or 61%) placing profitability in the "same as" to "moderately less" categories (3 to 4 range on the Lickert Scale).

For NX/P and X firms on a post-export basis there is only a slight change in the perception of profit. This indicates that for both groups profit expectations were largely achieved in the export exercise. Again, as in the case of risk, it is not possible to assign much weight to a changed perception of profit, or indeed an unprofitable experience, as a leading factor in the decision to discontinue export activity.

TABLE 4  
COMPARISON OF PROFIT PERCEPTION  
BETWEEN EXPORTING, NON-EXPORTING, AND NON-EXPORTING FIRMS WITH PRIOR EXPORT EXPERIENCE

Perception: Export vs. Domestic Sales	Non-Exporting Firms with Prior Export Experience				Exporting Firms				Non-Exporting Firms	
	P <sub>1</sub>	%	P <sub>2</sub>	%	P <sub>1</sub>	%	P <sub>2</sub>	%	P <sub>1</sub>	%
0	---	---	---	---	1	1.7	---	---	---	---
1	---	---	---	---	1	1.7	---	---	1	2.3
2	2	9.5	2	9.5	---	---	1	1.7	5	11.4
3	4	19.0	3	14.3	5	8.5	4	6.8	12	27.2
4	10	47.6	13	61.9	29	49.1	33	55.9	15	34.1
5	5	23.9	3	14.3	19	32.2	17	28.8	9	20.4
6	---	---	---	---	2	3.4	---	---	1	2.3
7	---	---	---	---	<u>2</u>	<u>3.4</u>	<u>4</u>	<u>6.8</u>	<u>1</u>	<u>2.3</u>
TOTALS	21	100.0	21	100.0	59	100.0	59	100.0	44	100.0

Perception Key: 0 - Don't know  
1 - Considerably less than domestic  
2 - Less than domestic  
3 - Moderately less than domestic  
4 - Same as domestic  
5 - Moderately greater than domestic  
6 - Greater than domestic  
7 - Considerably greater than domestic

#### Assessing Causal Factors in the Decision to Cease Exporting

The foregoing comparison of attitudes leads to the conclusion that, for the 21 non-exporting firms with prior export experience, changes in the risk/cost/profit factors after entering export markets are not critical to a decision to discontinue exporting. Risk perceptions of these 21 firms moderate somewhat (a presumably positive development), cost perceptions moderate slightly (also positive, but the shift is not as significant as

it is for the exporters who continue the activity), and profit perceptions--thought to be generally higher than for domestic sales--appear to remain unchanged. Thus, only in the area of cost, where these 21 firms viewed the relative costs as being higher for export *vis-a-vis* domestic sales, does the post-export suggest that this may be a major causal factor in the decision to discontinue .

Two additional observations are pertinent to the issue of cost. First, firms that continue to export showed a major shift in cost perceptions *after* the export experience. Export related costs must therefore have been considerably less than anticipated.\*

Of further interest in explaining any decision to discontinue export activity is the inclination of SM firms to view "costs" in *other than purely economic terms*. Evidence of this can be found in the individual firm comments concerning why these firms chose to discontinue exporting:

- I have enough business to do in the U.S.
- It costs too much to sell abroad.
- Too much trouble; foreigners steal your product.
- I really don't know how to sell abroad.
- My sales force can't adequately cover both the domestic and export market.
- We lack real motivation to market internationally and we really don't have the expertise.

Several of these comments underscore the observation that the massive size of the domestic market for these products is a disincentive *given* the perceived difficulty (not risk) of continuing to export. Hence, they are not motivated to seek new market opportunities, especially abroad, given what they believe to be the complexities involved (U.S. Senate, 1978).

The implication of this is consistent with the observation by those in export trading circles that risk is indeed often less in export sales. Most discontinuing exporters (19 of 21, or 90.5%) used an open account and only later reverted to guaranteed payment instruments. Only in one case was a financial loss sustained in an open account transaction. Further, only in one case did a specific event occur that caused the CEO to decide to discontinue the export activities of the firm. This was when he was told by an official of a railway company that in order to ship product into Mexico he would have to guarantee the cost of the rail car.

#### Conclusion

The high proportion of discontinued exporters occurring in a random sample of this size reinforces the conclusion that a main deterrent to increasing export activity in the smaller firm is attitudinal or behavioral. The perception of the risk, cost, or profit involved, no matter how favorable to an initial decision to export or seemingly favorable to continuing to export, is insufficient to offset the more negative perception of the "worthwhileness" of the activity. There was no evidence that the character of the product being sold, the marketing method being used, or the profit and loss outcome of the export sale differed substantially between the continuing exporter and the discontinued exporter.

Export activity is often thought to be incremental in view of the large domestic market within which most U.S. manufacturers operate. The absence of a cohesive national export policy coupled with the various legal and administrative hindrances that exist both in the U.S. and many potential market areas abroad serve to further lessen the appetite that the new-to-export firm may have for the continuation of an international marketing effort. In this context, the evidence from this research effort strongly suggests that the attitudinal

factor becomes critical to the decision to discontinue, not any purely economic or risk consideration.

A call to export because it is in "the national interest" is unlikely to have much effect on individual business decisions. Attitude and behavior are changed by the introduction of incentives that find expression in the profit and loss performance of the firm in a positive sense. A policy/legal package must therefore be devised that has the potential for significantly altering present views of the potential exporter or, in this case, the discontinued exporter. It might be hypothesized that, as a class of potential exporters, those firms with prior export experience can perhaps be more easily drawn back into the activity on a meaningful basis *if* government efforts produce a more favorable operating environment. This would serve to alter the mix of "economic/attitudinal" factors with which the discontinued exporter feels confronted. Hence, it would lead to more staying power of a broader segment of smaller manufacturing firms in the international marketplace.

#### References

U.S. Senate, Committee on Banking, Housing, and Urban Affairs, Subcommittee on International Finance, *Hearings on U.S. Programs and Facilities Designed to Support Exports*, (Washington, D.C.: U.S. Government Printing Office, 1978).

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\*For the entire group of firms studied (124), the main difference in perspectives regarding risk, cost, and profit which emerged between exporters and non-exporters was in the factor of cost.

## MARKETING ALTERNATIVES TO INTERVENTIONISM

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### Abstract

More and more U.S. firms tend to look to the government to protect them from foreign competition. This not only poses a threat to free marketing in general but to the firms themselves in particular. The main marketing-related issues involved are identified in this paper, as are the feasible marketing roles such firms can play under these circumstances. Finally, a number of alternative courses of action to protectionism are presented.

### Introduction

Protectionist sentiment is again on the rise in the U.S. The current recession and persistent inflation have broadened the range of special interest groups now clamoring for "fair" trade, to stem the tide of foreign imports.

Not only labor unions, but also management of affected industries seem to be leaning more and more towards government action. Even the automobile industry, controlled by multinational giants, now wants the administration to curb foreign car imports.

Such government intervention impedes free (international) trade. As such, affected U.S. business in general, and marketers in particular, face a particularly difficult time in the years ahead. The major question is how to deal with the situation. The objectives of this paper, then, are to (a) point out the pertinent marketing-related issues involved in interventionism and the different business approaches thereto; (b) identify the main marketing roles open to U.S. firms facing foreign competition, and, (c) suggest the most suitable marketing options these firms should consider.

### Issues and Reactions

At present more and more U.S. industries are leaning towards the use of the "government option", especially if they are hard-pressed by foreign competition. The problems faced by these firms are no doubt substantial. But apart from the fact that free trade does not guarantee the viability of all competitors, it may well be asked whether this plea does not endanger both our open economic system and our marketing system as we know it today. Actually this question reflects a number of pertinent marketing-related issues. These are (not necessarily in order of importance):

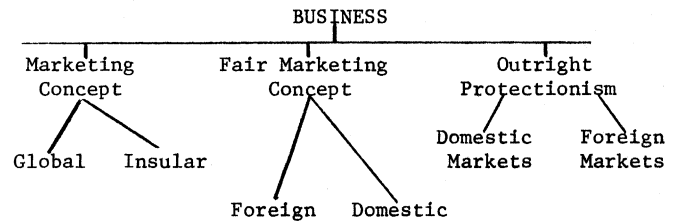
1. Developing or maintaining an (international) free market system.
2. Ensuring viable domestic competition.
3. Minimizing government intervention in international trade.
4. Fostering "fair" competition.
5. Boosting foreign marketing efforts.

### Business Views

The various ways in which business can approach these issues can be perceived as the different marketing concepts each holds on international marketing. **Figure 1** reflects the three main interpretations, with the **free marketing concept** as the "liberal" extreme and **outright protectionism** as the extreme pro-interven-

tionism viewpoint. The "fair" marketing concept represents a whole array of moderate positions.

FIGURE 1  
APPROACHES TO ISSUES



Those with a basically free marketing conception of international trade can be further split into two groups. One group adheres to what may be termed a "global" marketing concept. This concept represents the view that marketing activities world-wide should be conducted as free of intervention as possible. The view of the other group is more insular -- essentially free trade should be allowed between different countries but exceptions could be made to e.g. redress certain illegal or blatantly discriminatory practices, such as anti-dumping measures. The middle ground is occupied by those who favor "fair" trade rather than free trade. This argument rests on the philosophy that free trade is not always fair and that in such instances intervention is justified. Examples are the U.S. automobile industry and the U.S. citrus exporters attempting to enter the Japanese (foreign) market.

Outright protectionism is a less common phenomenon, but there are those that advocate undisguised protection from foreign competition, for instance, some farm groups.

### Implications

It is obvious that many U.S. firms and even entire industries face increasing foreign competition both at home and abroad. Unfortunately, too many of these businesses tend to adopt a marketing concept that is not a free trade one -- or at least do not do so consistently. They tend to appeal to and rely on some form of U.S. government intervention at home (via protectionism) or abroad (via diplomatic and economic leverage) to bale them out.

An over-reliance on government protection or intervention to facilitate foreign marketing efforts could prove to be a mixed blessing at best and a costly mistake at worst. Although a fair measure of consideration and support for U.S. business by the Administration and Congress is essential, many industries are running the risk of ensnaring themselves in new difficulties of their own making, such as:

- more government, labor, public and consumer control over their strategies;
- inability or unwillingness of the government to render assistance;
- retaliatory measures by affected countries and industries as a quid pro quo for U.S. protectionist policies;

neglect of identifying and solving the fundamental problems involved;

- over-complacent corporate policies in key areas such as marketing, technology, product quality, and productivity;
- growing reluctance by suppliers of resources such as financiers, materials suppliers, and prospective employees to be involved with such firms.

#### Marketing Roles

Alternatives to government intervention are available. Several marketing roles figure prominently among these, which is not surprising since the logical alternative to trade restrictions is freer marketing systems. These options should be seriously considered by the firms in question, not so much to support the principle of free trade but because these alternatives enable such firms to deal with the root causes of the problems and not merely with the symptoms.

One way of looking at the marketing roles is depicted in **Figure 2** and **Figure 3** respectively.

FIGURE 2  
FEASIBLE DOMESTIC MARKETING OPTIONS

Degree of Foreign Competition	Marketing Roles			
	Insular Marketing	Global Marketing	Gov't Lobbying	Get Out
None	X	X		
Weak	X	X		
Strong		X	X	
Overwhelming		X	X	X

view of the competitive marketing environment. If competition cannot be overcome even with more realistic and dynamic marketing strategies, then recourse could be had to the government - lobbying for some form of support.

**Figure 3** represents a similar matrix analysis for the feasible marketing roles for firms operating in foreign markets. Although more major options are available, the non-interventionist or defeatist (give up) options are most feasible when market access is relatively easy and competition comparatively weak. In markets where the competition is strongest, exporting usually has to be abandoned in favor of a more localized effort such as a foreign subsidiary or a more foreign involvement through a joint venture or some other contractual arrangement.

In markets where the access is difficult or prohibited, not because of competition but because of legal, bureaucratic or other obstacles a stronger case can be made out for government lobbying. However, appeals for such intervention should only be undertaken when local participation or involvement (subsidiary) is not feasible. In many instances, lobbying will be ineffective which necessitates the firm to abandon the attempted market entry, at least for the time being. Firms choosing the lobbying option should realize that they have in fact also opted for another marketing alternative - marketing their proposal or request to the government in question. This necessitates specialized "marketers" with specific "marketing" skills.

#### Marketing Options

What are, more specifically, the various marketing options that U.S. business firms could exercise in fulfilling their respective marketing roles relative to

FIGURE 3  
FEASIBLE FOREIGN MARKETING OPTIONS

Degree of Foreign Competition and Accessibility	Marketing Roles					
	Export Marketing	Foreign Subsidiaries	Joint <sup>a)</sup> Ventures	Contracts <sup>a)</sup>	Gov't Lobbying	Give Up
Easy access, no/weak competition	X	X				
Easy access, strong competition	X	X				
Easy access, overwhelming competition			X	X		X
Difficult access, no/weak competition	X	X			X	
Difficult access, strong competition	X	X	X	X	X	
Difficult access, overwhelming competition			X	X	X	X
Prohibited access, no/weak competition					X	X
Prohibited access, strong competition					X	X
Prohibited access, overwhelming competition					X	X

a) Excluding joint ventures or contracts that are essential because of legal requirements or because of the type of product/service e.g., industrial property rights, copyrights, etc.

In **Figure 2** the feasible options are indicated for firms faced with foreign competition in their U.S. markets. As the degree of competition intensifies, less reliance can be placed on insular marketing policies aimed solely at domestic competitors and more on a global

foreign competition as discussed above? The following alternatives should be considered:

\* More realistic marketing strategies.

Firms should look at the unique advantages they have to offer in terms of resources and oppor-

tunities.

\* Improved intelligence services with which to better anticipate environmental changes.

Sharper marketing intelligence may provide some advance warning as to which countries and products are likely to be subject to embargoes or other trade restrictions.

\* Adjustments in supply, import, and distribution policies.

For instance, the large-scale importation of better quality or of cheaper products, the establishment of distribution channels in other countries and the use of more competitive foreign suppliers.

\* More emphasis on product quality.

New techniques should be developed, updated, and adjusted, at least in step with competitors.

\* Global orientation.

Management thinking, strategy, and education should be broadened substantially to allow for the impact of the dynamic international environment both at home and abroad.

\* Overcome bureaucratic inertia.

Big business should recreate an atmosphere in which innovativeness and entrepreneurship can thrive.

\* Lobbying in favor of free trade.

Whenever doors for U.S. business are closed to conduct free trade, a sound case should be made to (re) open them.

\* Joint ventures.

Affected U.S. firms and their foreign competitors could join forces, especially if they have complementary skills or resources.

#### Conclusions

The popular notion that U.S. business and labor interests are best served by government protection of local firms and government intervention in foreign markets on behalf of local firms is gaining support. The dangerous implications of such action on the initiating firms are usually overlooked or down-played.

The fundamental question is whether our free marketing system as we know it today can be preserved, if such government interventionism is encouraged. Equally important is the question of whether the interests of individual firms and industries concerned are better served by such protection and assistance.

Firms that cannot overcome their own problems in the long run have to face the music anyway. Government assistance is only going to prolong the agony. Those firms that realize their misconceptions of their marketing roles in time may be able to formulate a realistic new marketing strategy to counter foreign competition. This does not exclude the possibility of lobbying for government intervention, but such appeals should be based on upholding the principle of free trade, not to create exceptions to it.

Some empirical studies are recommended to determine to what extent U.S. business adheres to a free marketing concept and which roles it plays in different competitive situations. Such studies could, for instance, be concentrated on a number of problem industries in the U.S.



DIAL YOUR SUCCESSFUL SMALL BUSINESS MARKETER:  
THE CLASSROOM TELEPHONE INTERVIEW

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Abstract

The classroom telephone interview is an effective technique for bringing realism into the marketing class. Advantages of and suggestions for using the technique are given. The effectiveness of the classroom telephone interview is evaluated.

The Classroom Telephone Interview

The relevance of the traditional marketing curriculum to the "real world" has often been challenged. Academics such as Gaedeke, (1973), and Gelb (1971), as well as practitioners such as Keane (1977), Crandall (1976), and Hise (1975) have called for more pragmatic programs with stronger emphasis on actual business practices. Enis (1977) has described marketing as a product and suggested that educators need to reconsider the nature of the product to meet student needs in the 1980's. Joyce and Krentler (1980) have built on this suggestion and advocated a marketing orientation to educate marketers to market education.

At the same time these criticisms are advanced, it has been observed their marketing curricula have traditionally been oriented to the perceived world of big business, rather than small business. (Brannen, 1978). Yet, today, of the nation's 13 million businesses 99 percent qualify as small, i.e. employing fewer than 100 persons, and these firms account for about 40 percent of all paid employment (U.S. Department of Commerce, 1977).

To address this imbalance many schools are now offering, or considering, courses in small business marketing, small business management, entrepreneurship, or venture capital. Yet the central question of how realism, expertise, and relevance to the world of small business can be introduced into the undergraduate marketing curriculum remains. The purpose of this paper is to describe one such technique, "Dial Your Successful Small Business Marketer," which has been used to help accomplish this end.

Many techniques are available for helping students apply conceptual materials to real world business situations. Some require the restructuring of an entire course or even the entire curriculum. Others can be integrated into existing structures. Among the techniques for increasing realism (Reizenstein, 1978) are the co-op approach, the student consultant approach, market opportunity analysis, venture analysis, several types of course projects, case analysis, research papers, role playing, business games, and in-class guest speakers. Each of these has its own set of advantages and limitations. "Dial Your Successful Small Business Marketer" is a classroom telephone interview technique which may prove to be especially useful and effective for classes dealing with small business.

This approach uses an amplified portable conference telephone as the means for discussion between students and successful small business operators.

Student teams investigate a selected small business, brief classmates on the operation, and conduct an in-class telephone interview.

The use of the telephone as an aid to education is not new, although improved technology and the energy shortage may be giving it a new emphasis today. Many of these educational uses are traced historically by Warren (1975). The initial application in college courses was in 1947 at the School of Dentistry of the Chicago campus of the University of Illinois where lectures given to Chicago dentists were simultaneously telephoned to Scranton, Pennsylvania. More recently, the Marketing News reported that Bell's business conference telephone has been repositioned as an educational device (1980).

The classroom telephone interview technique offers several advantages for bringing realism and expertise into the marketing classroom. Some of these advantages are:

1. If a success orientation is to be encouraged, only successful small business operators are selected for interviews. Under some other techniques, such as SBI consulting, relatively new and marginal firms are often included.
2. Student participation and involvement can increase student motivation and learning. The use of pre-interview student teams (discussed later) and good equipment can help accomplish this.
3. Both the dollar cost and time cost are relatively low for the telephone guest speakers, the school, and the instructor. Class time can also be used more efficiently because telephone interviews offer more flexibility in starting time, length, and termination than a conventional in-class speaker.
4. Other problems of in-class guest speakers are minimized or eliminated. Such problems are parking, coordinating transportation, late arrivals, and anything else that Murphy's law might suggest.
5. Long distance as well as local small business operators can be interviewed. This is especially important for schools not located in urban areas offering a wide variety of small firms.
6. The necessary equipment sets up quickly and is easy to use.
7. Visual aids such as copies of advertisements, organization charts, packages, maps, photographs, computer print outs, etc., may be used along with telephone interviews. Such items are usually obtained by the pre-interview student team.

8. As a member of pre-interview student team, each student has (a) personal contact with a successful small business marketer, (b) hands-on use of the equipment, and (c) a leadership role in conducting the telephone interview and promoting communication between the telephone speaker and the entire class.

#### How to Use the "Dial" Program

The "Dial" program has been used by small business marketing classes for two different semesters at Creighton University. The course also used a full length textbook (Brannen, 1978), lectures, tests, a few in-class speakers, and one visit to a small business. For the telephone interviews and for the total course, being able to relate conceptual materials to the real world of small business was a major learning objective. The equipment used the first semester was a Bell System portable conference telephone. This equipment has been repositioned in the market by Bell. It is now known as Telexplorer and is an educational device aimed primarily at grades K through 12. The equipment consists of a loud speaker on which the entire class could hear the person being interviewed, a microphone on the portable console, and two external microphones on extension cords which could be passed around the classroom. The unit plugs into a standard telephone wall jack in the classroom. This equipment is portable, easy to use, and adequate for the program if the class is small.

Equipment used the second semester has a Darome Model 461 microphone. The convener and telephone plug in together to a standard wall coupler. The convener acts as a loud speaker system for the person being interviewed over the telephone and for the ten microphones throughout the classroom. Cost of the convener and four microphones was about \$700. An additional six microphones cost about \$400. The only other cost was for installation of the telephone and a telephone line. Of course, toll charges would result if long distance were used. The chief advantage of the Darome equipment is its ability to provide a microphone within easy access of all students.

The equipment at the interviewee's end of the line is usually an ordinary telephone. However, extensions could be used for a joint interview with two or more partners. Or, more elaborate equipment such as a conference telephone or a conference call could be used.

Setting up the program involves securing a list of successful small business operators, pre-interview preparations, the interview itself, and post-interview matters.

The list of successful small business operators can be compiled from several sources. Plan for a wide variety; otherwise you may end up with only the retail establishments near the campus. A successful industrial marketer of services can be every bit as interesting to the students as retailer or a manufacturer of consumer goods. Leads can be obtained from the local Chamber of Commerce or its Small Business Council, from students, from personal contacts such as previous students or businesses where you shop, from your school's bureau of business and economic research or management education center, and from local business

publications. Students may be especially interested in interviewing unique small business operators such as one who has unusual television advertising.

A student team of two or three students is assigned to each small business operator selected for a classroom telephone interview. Pre-interview preparations are an important aspect of the program. Before the student team visits the small business operator, the professor has telephoned the small business operator to explain the project and solicit cooperation. The pre-interview visit by the student team establishes rapport, explores areas of interest to the class, and provides an opportunity to discover additional ways to make the interview a better learning experience. The visit also serves as a rehearsal session for many of the small business operators. Students use a topical guide as a starting point to explore the background of the business, key elements of the environment, all aspects of marketing strategy, and issues of planning, execution, and control.

The pre-interview visit has provided many benefits in terms of making the actual telephone interviews better. A shoe retailer who had recently returned from an annual show in Dallas was encouraged to expand on the details of the trip. A franchisee who was about to open an additional location was encouraged to discuss this decision. A retailer discussed more fully his participation on a committee of the Better Business Bureau. A small manufacturer described how she became a successful exporter to Canada.

The telephone interview itself is conducted by the student team. Other members of the class are invited to ask questions. Before dialing the interviewee at the prescribed calling time, the class is given a briefing by the student team. The firm name and the name of the interviewee are clearly written on the blackboard. The length of the interview varies from 25 to 45 minutes.

Immediately after the interview is completed, a brief discussion of what was learned takes place. Confusing points can be clarified. Examples given by the interviewee can be related to concepts learned in the course. At this time each class member completes the student evaluation form of the experience. Another post-interview matter is for the professor to send a short but personalized thank you letter to each cooperating small business operator. In order to get some feedback, a brief questionnaire soliciting the small business operator's impression of the interview may be included with the thank you letter.

Individual professors may wish to make variations in the procedure described above or incorporate ideas from other sources (Warren, 1935). A few suggestions which may make the program work better are:

1. Early in the term, use a few minutes that otherwise might be wasted for all students in the class to familiarize themselves with the equipment by making telephone calls to friends.
2. Have students set up and take down the equipment. This is easy and it saves time and promotes a sense of participation.

3. Consider busy times of the day and days of the week for small business operators when class scheduling is being done.
4. Begin using telephone interviews only after the term is well underway in order that the course concepts may first be acquired. If early use of the telephone interview technique is desired, general speakers such as an SBA representative or the director of the Small Business Council of the Chamber of Commerce may be more effective.
5. Have a short meeting with each student team shortly before the pre-interview visit with the small business operator. At this meeting try to show them how to adapt the topical guide and use it to best advantage in their particular situation.
6. If possible, arrange the seating of the room to maximize student access to microphones and have all students sit so they can see each other.
7. During the interview, the professor can use the blackboard to record figures or other key items and to give suggestions to students about questions they might ask.

#### How Well Does It Work?

Is the classroom telephone interview an effective learning technique? How do telephone guest speakers compare with in-class guest speakers? How well did the "Dial Your Successful Small Business Marketer" program perform? The answers to such questions as these are not conclusive but the available evidence seems to suggest considerable merit to the approach. For example, from a business policy class which used the telephone interview technique, the following was concluded:

The course evaluation completed by class members near the end of the semester identified the telephone interview program as the single most important element contributing to student interest and learning in the business policy course, (Warren, 1975).

Another study which used the executive telephone interview reported: At the end of the course, further evaluation showed an extremely favorable response to the executive telephone interview program. Overall, nearly ninety-nine percent of the students questioned favored continuation of the program; moreover, the same percentage strongly supported extending the concept both to other Marketing classes and to other College of Business courses. In addition, when the telephone interview technique was matched against the in-class speaker, 28 percent of the responses indicated a preference for the telephone interview, and 30 percent evaluated the two methods as equivalent. Only 30 percent thought the telephone interview approach inferior to the in-class speaker (primarily due to the lack of

face-to-face contact), while 3 percent liked neither. Given the time and cost savings to executives, the university, and the instructor, and the strong student support for this approach, continued use of the executive telephone interview certainly seems warranted, (Reizenstein).

Two of the conclusions of this same study were:

Students perceive executive telephone speakers as being as competent and as interesting as an in-class speaker of known high quality.

Students perceive no significant difference in the value or effectiveness of a class devoted to a telephone speaker as compared to one devoted to an in-class speaker of known high quality.

To assist in evaluating the effectiveness of the "Dial" program, students were asked to evaluate each of the telephone presentations using a standardized questionnaire format. The questionnaire consisted of a series of items describing general characteristics of an effective educational presentation. Each presentation on each item, was "graded" using a scale of A, B, C+, C, D, F. Questionnaires were completed evaluating both the telephone interviews and in-class presentations by guest speakers during the course. A total of 110 responses on each item were obtained for telephone, and 45 responses were obtained for in-class presentations.

The items on the survey questionnaire, are grouped into two classes: items which are speaker or presentation oriented and items which are subject matter oriented. Since data are available for both telephone and in-class presentations it is possible to compare both methods. Overall, both telephone and in-class presentations receive top marks on critique items. All items have an average grade higher than "B", and any evaluation lower than "B" is almost non-existent. Table 1 provides the results relating to evaluations of the speakers. There are no significant differences between the two methods for evaluations of communication of the message, understandability, and use of realistic examples. Significant differences exist for ratings of effective delivery and believability. The in-class presentations received higher ratings for effective delivery, which is understandable considering the advantages of face-to-face communication. The telephone method is rated more believable.

TABLE 1

## EVALUATION OF EXECUTIVES AS SPEAKERS

Dimension	Telephone Mean	In-Class Mean
*Effective Delivery	6.555	6.867
*Believability	7.327	6.956
Communication Message	6.527	6.711
Understandibility	6.745	6.911
Realistic Examples	6.936	6.889

\*Indicates items with statistically significant differences in evaluations at the .05 level.

A=8, B=6, C+=5, C=4, D=2, F=0

TABLE 2

## EVALUATION OF PRESENTATION SUBJECT MATTER

Dimension	Telephone Mean	In-Class Mean
*Interesting	6.536	6.844
Informative	6.955	7.089
How Much Learned	6.318	6.422
Real World, Not Theory	7.400	7.289
*Share Success Secrets	6.900	6.244
Detail, Depth of Message	6.509	6.333

\*Indicates items with statistically significant differences in evaluations at the .05 level.

A=8, B=6, C+=5, C=4, D=2, F=0

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A MULTIPLE DISCRIMINANT ANALYSIS PREDICTION OF PERFORMANCE IN PRINCIPLES OF MARKETING

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Abstract

This paper describes a successful attempt to derive a discriminant function that can be used to predict the letter grades students will earn in Principles of Marketing. The results are compared to the findings of other published studies on the prediction of academic performance and the uses of this type of analysis in strategies for reducing student attrition in Principles of Marketing are discussed.

Introduction

Higher education is entering an era during which its traditional primary market will be shrinking. By 1995 the number of students graduating from high school will be 20% below current levels, resulting in a possible 10 to 15% decline in new college entrants from this market (Larson, 1980).

Numerous articles are appearing that discuss strategies colleges and universities may implement to minimize enrollment declines. These strategies typically involve increasing marketing efforts in the high-school-graduating-class market, recruiting more students from other markets such as the adult education market, and reducing attrition rates of students who have been successfully recruited. This article presents the results of a study of the Principles of Marketing course at one college that can serve as a model for schools or departments that adopt the third strategy.

Grades of students in Principles of Marketing were predicted with a reasonable degree of success and characteristics of marketing students that were useful predictor variables were determined. The method employed is applicable to other courses and provides information that can be used to select qualified students for a course, to select courses for a student that he/she has a reasonable chance of completing successfully, and to identify students enrolled in a course who may need extra attention if they are to succeed.

Methodology

The data used in this study consisted of the 173 students who completed Principles of Marketing at Marietta College during the 1979-80 academic year and the Fall semester of 1980-81. Grades earned in the course were obtained from the instructor's class records and other student data were collected from the records office. A description of these items and how they were coded is contained in Table I.

The data were analyzed by the Discriminant Analysis routine of the Statistical Package for the Social Sciences (SPSS) using the stepwise option (Nie et al, 1975). The categories of the dependent variable were the grades earned in Principles of Marketing. The "D" and "F" grades were combined, as a liberal drop policy has resulted in very few course failures. The entry criterion was changes in Rao's V significant at the 10% or lower level. A random sample of 25% of the cases (43 cases), stratified by the proportion of total cases in each grade group, was selected as a validation

sample, with the remaining 130 cases serving as the analysis sample.

TABLE I  
PREDICTOR VARIABLES

Variable	Symbol	Coding
Cumulative grade point average	GPA	4 point scale
High school percentile rank	HSRANK	
Business-economics major	MAJ	No = 0, Yes = 1
Prescribed junior class rank when taking course	CRANK	No = 0, Yes = 1
Greek affiliation	GREEK	No = 0, Yes = 1
Sex	SEX	Female = 0, Male = 1
Verbal Scholastic Aptitude score	SAT-V	
Mathematical Scholastic Aptitude score	SAT-M	

Results

The discriminant function derived was

$$D = -0.87125 \text{ GPA} + 0.32998 \text{ HSRANK} - 0.24295 \text{ SEX.} \quad (1)$$

The change in Rao's V as a result of adding GPA was significant at the 1% level; as a result of adding HSRANK, at the 5% level; and as a result of adding SEX, at the 10% level.

TABLE II  
VALIDATION SAMPLE CLASSIFICATION RESULTS

Predicted Grade	Actual Grade			
	A	B	C	D-F
A	2	1		
B	2	17	6	1
C		1	11	2
D-F				

Table II shows the results of using equation (1) to predict the grades of students in the validation sample. Correct classifications fall on the top-left to bottom-right diagonal and represent about 70% of the cases. In the absence of a classification function the maximum number of correct classifications would be obtained by predicting all students to fall into the



largest group. This would have resulted in 45% having been correctly placed into the "B" category. The model thus increases the proportion correctly classified by about 25%. In addition, the model makes possible the correct classification of cases other than those that fall into the largest group. Consequently, the 25% figure somewhat understates the improvement in predictive power that the analysis provides (Morrison, 1969).

The centroids of the groups are shown in Table III. The centroids ascend in value as the grades run from "A" through "D-F." When grades of ungrouped cases are predicted, cases with lower discriminant scores will be predicted to earn higher grades.

TABLE III  
GROUP CENTROIDS

Grade	Centroid
A	-1.43227
B	-0.17216
C	0.47885
D-F	0.51418

Equation (1) shows the predictor variables that were found to be effective discriminators among the grade groups and their standardized discriminant coefficients. GPA was the first variable to enter the function, contributing about two and one-half times as much to the discriminant score as the second variable. The negative coefficient of GPA indicates that students with higher overall GPA's earned higher grades in marketing, as would be expected. The second most effective predictor was HSRANK, with a positive coefficient. Since a higher class standing results in a lower score on this variable, the positive coefficient indicates that students who graduated higher in their high school classes performed better in marketing.

The final variable to enter the discriminant function was SEX, contributing about 70% as much to the discriminant score as HSRANK. Since females were coded zero and males one, females received no adjustment to their discriminant score from the SEX variable while males received a reduction in their score equal to the SEX coefficient of 0.24295. This indicates that, all other variables equal, males earned higher grades in marketing than did females.

The remaining five variables did not add significant discriminating power and were, therefore, not brought into the discriminant function. A comparison of classification results between the function presented here and one that included all eight variables showed that the latter function had an identical overall correct classification rate as the one presented here, though the distribution of correct classifications between the "B" and "C" categories shifted slightly. Consequently, it appears that predictions of grades in Principles of Marketing can be made with a reasonable degree of success from only three pieces of information about students.

#### Discussion

##### The Hit Rate

Though the hit rate of 70% correct classifications represents a substantial improvement over the rate that would be obtained without the discriminant function, an examination of the rates in the various grade categories shows that the most critical grades were predicted least accurately. None of the three stu-

dents in the validation sample who actually received a "D" or "F" were predicted to be in that category. There are two possible explanations for this result. First, the "D-F" group of the analysis sample was small, containing only thirteen cases. A larger data base with more cases in this group would provide more information as to the characteristics of these students and increase the probability that the analysis could differentiate them from members of other groups. Second, there is the possibility that the variables included in the study did not contain information that isolated "D" and "F" students. For example, the "D-F" students may have been equally qualified with "C" students on the three predictor variables, but did not perform as well because of less study time resulting from laziness or employment. This possible shortcoming of the model can be reduced through further research that includes additional variables that may contain information not included in this study.

##### Comparison with Other Studies

A review of the literature yielded no studies of prediction for Principles of Marketing. However, studies of other business administration and economics courses and programs and of other disciplines which included some of the same predictors utilized in this project were found. These studies provide a basis for comparison of the results of this analysis.

That GPA was the first variable to enter the discriminant function is no surprise in light of the published research on the prediction of academic performance. Indicators of previous academic performance have probably been the most consistent predictor variables found. A study of working undergraduate business students found freshman-sophomore GPA a better predictor of academic success than several other variables including hours worked per week, sex, age, and high school graduating rank (Mills, 1978). A study of Principles of Economics students found GPA superior to major, sex, and credit hours completed (Clauret and Johnson, 1975). Studies of non-business and economics students have produced similar results (Chissom and Lanier, 1975; Worthington and Grant, 1971), while studies of graduate students have found undergraduate GPA to be a significant predictor of graduate performance (Federici and Schuerger, 1974; Gustafson and Michael, 1976; Leonardson, 1979).

The second variable to enter the discriminant function, HSRANK, is also an indicator of previous academic performance, but at the high school rather than the college level. This result is consistent with Mills' (1978) finding that freshman-sophomore GPA is a better predictor of success of working undergraduate business students than is their high school graduating class rank, but is contrary to that of other studies that have found HSRANK superior to GPA (Brasch, 1972; Kloepping, 1972). The relevance of these latter studies to the present one may, however, be questioned as they dealt with calculus and disabled students rather than students of marketing, business administration, or economics.

Sex has been found to be a useful predictor in other studies of academic performance. Watley and Martin (1962) in a study of freshman business students found differences across the sexes in the predictive power of various tests and derived separate regression equations for the sexes. They did not, however, comment on which sex exhibited the better academic performance. Mills' (1978) study of working undergraduate business students found sex a weak but statistically significant predictor, but she also did not reveal which sex performed better. Clauret and Johnson



(1975) found that males performed better in Principles of Economics while McDonald and McPherson (1975) found that among students enrolled in Principles of Economics, females had higher overall GPA's. The mixed results of previous research do not provide a basis for concluding whether the superior performance of males in Principles of Marketing found in this study is consistent with prior findings.

Variables found to be of no use in predicting performance in this analysis have been found significant in other studies (Chissom and Lanier, 1975; Clauretje and Johnson, 1975; Passons, 1967; Watley and Martin, 1962).

#### Implementation

The results of this type of analysis can be implemented with varying degrees of rigor. The most rigorous application would be to require a certain discriminant score for admission to the course. Though discriminant analysis is sometimes applied this way in granting credit and in selecting people for admission to educational programs, it probably would not be desirable to use it in this way at the course level. A school could find itself in the ridiculous position of denying students admission to required courses and could face discrimination litigation if variables such as sex, race, or age turned out to be effective predictors.

A more practical application would be to use the results as a tool in the advising process. For example, if a student not required to take Principles of Marketing was considering it as an elective, her grade could be predicted from the discriminant function. If this grade was not greater than or equal to the grade needed or desired, she could be advised to take another elective where her chances of earning the needed grade were higher, or to exert some extra effort in Principles if she still desired to take it. For students required to take Principles, those with low predicted grades could also be advised to be especially cautious about their course performance and could be offered extra assistance by the instructor or a qualified tutor.

For advisors not wishing to go to the trouble of calculating students' discriminant scores, the analysis can still be of value in that it provides profiles of typical successful and unsuccessful students. The successful profile is a male who graduated near the top of his high school class and who has maintained a high college grade point average, while the unsuccessful profile is a female who has not done especially well in either high school or college. When advising students based on how they compare with these profiles the relative contributions of the predictor variables to the discriminant score should be kept in mind. For example, a female with a high GPA would be more likely to earn a satisfactory grade than a male with a low GPA because GPA contributes over three and one-half times as much to the discriminant score as does SEX.

If the profiles of the successful and unsuccessful students were undesirable, further research could be undertaken to determine why the course favored the type of student it did and how it could be modified to be more suitable to the desired profile. The results presented here with respect to students' sex might prompt this type of action.

#### Conclusion

This paper presented the results of a successful attempt to use multiple discriminant analysis to predict grades students will earn in Principles of Marketing

and discussed how the results can be implemented to reduce student attrition in the course. Since the study included students of one instructor at one college and considered a limited number of possible predictor variables, it should be regarded as a model for further research rather than as a conclusive statement on indicators of performance in Principles of Marketing. Replication of this study at other schools, including additional variables, could result in a superior set of predictors with a wider range of applicability than the set presented here.

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EXPLORING COLLEGE STUDENT SATISFACTION  
A MULTI-ATTRIBUTE APPROACH

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Abstract

The past decade has seen an increase in the use of marketing technology by non-business areas such as hospitals, politics and education. This paper continues this trend by examining the components of college student satisfaction. A satisfaction questionnaire was developed and data were gathered from 124 MBA students. Factor analysis and multiple regression were employed to determine and assess the salient components of satisfaction. The results indicate that quality of education and evaluation are important determinants of college satisfaction.

Introduction

It is no secret that many colleges and universities are in trouble. For example, Marylhurst College in Portland, Oregon, ceased instruction in 1974 after 85 years of operations, while Racine College in Wisconsin merged with Lewis University of Lockport, Illinois. More than 170 such private colleges have closed their doors since 1965 (Pyke 1977). Professor Dunn has estimated that by the year 2000, 25 percent of all residential liberal arts institutions will have vanished (1979). While the "elite institutions" are likely to escape such a fate, the future for many institutions is not bright (Ramirez 1979).

This rather pessimistic view is the realization that the once unprecedented sellers' market in higher education is now a buyers' market, and likely to remain so for sometime (Glenny 1973). There is not only a decrease in the eligible eighteen-year olds, but other factors, such as the end of the military draft, the rapid escalation in tuition rates, the increased competition from vocational and technical schools, and a decline in the need for certain college majors in the job market, are all affecting demand for college education. This situation has caused many to emphasize the need for a marketing approach to the declining enrollment problem (Buchanan and Barksdale 1974; Gorman 1974).

With the growing acceptance of marketing, we have seen an increase in attempts to match the universities' peculiar offerings, resources and advantages with well defined target markets. In particular, there is growing use of promotional materials such as news releases, posters, classified ads and all forms of paid advertising. The college catalogue has also taken on new dimensions. It is no longer just a source of information, but is often the prime promotional tool. Well-designed and colorful brochures focusing on specific programs are important in direct mail campaigns. Admissions officers have increased their staff to act as professional salespeople for the school and its programs. Some schools have even tried giving away such things as frisbees and T-shirts to prospective students. Others have evaluated and changed not only course but entrance requirements.

While some have been highly critical of many of these efforts (Scully 1979; Sheffield and Meskill 1974), the future direction seems clear. To be competitive in the educational marketplace of the future, institutions of higher education, especially the private ones, must plan, test and refine their marketing strategies. This requires careful research into existing and potential market segments and a thorough appraisal of present and potential student-attracting attributes of a particular institution.

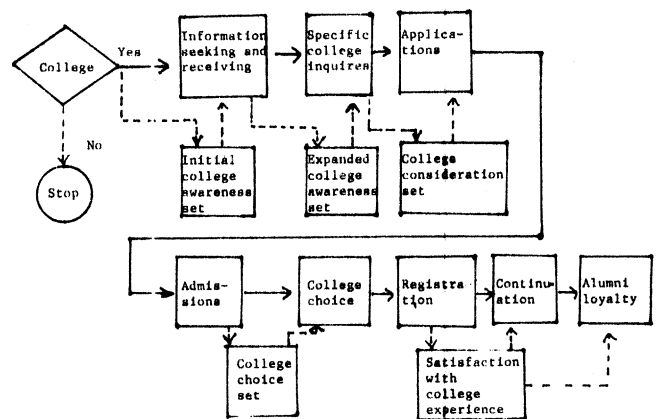
Student Decision Process Model

Unfortunately, much of the university-oriented research has been quite general and largely conceptual in nature. This means, of course, that much college-oriented marketing research remains to be done. However, many of the reported studies can be viewed in the context of the Kotler Student Decision Process Model (1976). This model provides the needed conceptual framework to unify and focus future college-oriented marketing research.

Professor Kotler describes the student decision process as consisting of nine steps (Figure 1). The first step is the student's decision whether or not to attend college. The student who decides to attend begins with an initial college awareness set. In step two, the information seeking and receiving state, this set is expanded. Step three follows with the student sending requests to certain colleges for catalogs and application forms. After evaluating the colleges in the awareness set, the student sends applications to a particular group of colleges labelled the college consideration set. The student in turn receives acceptances from certain colleges that become the student's choice set.

FIGURE 1

THE KOTLER STUDENT DECISION PROCESS MODEL



\*The Kotler model has been modified slightly with the addition of the satisfaction component.

The next step, step six, the student chooses a college from this choice set, resulting in registration. Further decisions by the students are whether to continue at that college, transfer, or drop out. Finally the student makes a decision regarding alumni status - an active, passive or indifferent role.

To date, much of the college-oriented marketing research has focused on two general areas of the Kotler model, attribute evaluation of the college choice set and perceptions/image of the college consideration set. The MacLachlan and Leister studies used multi-dimensional scaling to develop perceptual maps of potential students' college consideration set (1975). Punji and Stelin investigated the college choice behavior of graduate business school applicants by modeling the students' choice set (1976; 1978). Cook and Zallocco used a multi-attribute approach to predict preference for a university from students' college consideration set (1979). Finally, Vaughn, Pitlik and Honsotla conducted a study to determine the salient components in the choice of one university (1978).

#### Study Objectives

These studies, while no doubt contributing to improved college recruiting strategies, have ignored students' satisfaction with their college experience. As diagrammed in Figure 1, satisfaction with one's education is directly related to continued education at a particular institution. Also, it determines whether or not a former student becomes a loyal alumni. With students more mobile today than ever before and the growing need for alumni support, it is no longer enough just to develop better recruiting strategies. Marketing efforts must also focus on keeping the present students enrolled and building a base for a strong, loyal alumni. This requires, in part, internally marketing the School to the students by maintaining an adequate level of "student satisfaction".

Although marketing scholars have ignored researching student satisfaction (of course, this is not the case for consumer satisfaction - for example, see Hunt 1976), it does not mean that the examination of certain aspects of student satisfaction has been neglected. Recent studies from the literature in education demonstrate the efforts to define, develop and validate means to measure college student satisfaction (Betz, Klingensmith and Menne 1970; Betz, Menne and Starr 1971; Starr, Betz and Menne 1971b). Moreover, one study was conducted to verify similar satisfaction dimensions across institutions providing different types of educational experiences (Waterman and Waterman 1971). Differences on satisfaction scores were also found between students who dropped out and those who did not, suggesting that satisfaction is an important factor in student tenure (Starr, Betz and Menne 1971a). Other studies have examined correlates of student satisfaction, including select college environmental characteristics, peer relationships, grades and faculty congruence (Braskamp, Wise, Hengstler 1979; Field, Holly and Armenakis 1974; Morstain 1977).

The studies noted above have not focused directly on the salient attributes of student satisfaction and how they relate to overall satisfaction. Thus, the purpose of this study is (1) to determine the dimensions of student satisfaction of one university program and (2) how they are associated with overall satisfaction.

TABLE 1

1. Competence of teachers in their field	.46
2. Chance to get acquainted with teachers	.56
3. Chance to explore important ideas	.71
4. Quality of material emphasized	.70
5. Friendliness of most faculty	.66
6. What learned in relation to amount of time spent in school	.54
7. Willingness of teachers to talk to students outside of class time	.67
8. Practice you get in thinking and reasoning	.76
9. Chance to participate in class discussions	.59
10. Course sequence and prerequisites	.47
11. Requirements for your degree	.49
12. Chance to be heard with a grade complaint	.61
13. Chance to work with members of the opposite sex	.67
14. Activities and clubs you can join	.83
15. Chance to get acquainted with other students outside of class	.56
16. Chance for men and women to get acquainted	.80
17. Campus events for students	.72
18. The way teachers talk when you ask for help	.50
19. Amount of study required for a passing grade	.68
20. Chance to do well if you work hard	.60
21. Fairness of teachers in grading	.80
22. Chance that your grade reflects effort	.54
23. The ability of advisors in helping students develop course plans	.75
24. Interest advisors take in your progress	.49
25. Chance to get help in selecting electives	.66
26. Availability of advisor when needed	.59
27. Amount of work required	.63
28. Teachers' expectations regarding how much students should study	.46
29. The pressure to study	.59
30. Amount of time you must spend studying	.73
31. The difficulty of most courses	.58
32. The chance to develop to the best of your ability	.52
33. Places to relax between classes	.79
34. Availability of places to lounge	.74
Percent total variance	.53 .66 .74 .80 .86 .90 .94
Eigenvalues	12.9 1.0 1.2 1.6 1.4 1.1 1.0

## Methodology

An initial list of attributes believed to be important to MBA satisfaction was developed primarily from the work of Betz, Klingensmith, Menne and Starr. One class of MBA students was asked to determine whether the list of attributes was relevant or not to satisfaction with their education. This questioning process produced a list of 56 attributes. A questionnaire using these attributes plus one overall satisfaction question was then developed. Respondents were asked to rate each item in terms of satisfaction on a five point scale where five was very satisfied. In the Spring of 1979, 150 questionnaires were administered to MBA students from six different classes in the Albers School of Business at Seattle University, Seattle, Washington. One hundred twenty-four usable questionnaires were returned.

Factor analysis was employed to reduce the redundancy in the variables and to eliminate variables that failed to load significantly on any factor. The criteria established in evaluating the output of the varimax analysis was to cease factoring when all eigenvalues greater than one were obtained and when the factors explained a large percentage of the total variance. Variables were considered not significant and eliminated from further analysis when they possessed a loading of .45 or less on any factor. The results of the varimax factor analysis containing 34 acceptable variables were given in Table 1. The individual factor scores on the seven factors were used to construct composite factor scores for each respondent or case. Using these scores as the independent variables and the overall satisfaction score as the dependent variable, a step wise regression analysis was performed.

## Results

Table 1 shows that seven factors with eigenvalues of 1.0 or greater were retained explaining approximately 94 percent of total variance. Variables with a .46 loading or greater are associated with the appropriate factor in Table 1. Subjective evaluations of each factor were made and each factor is discussed below with reference to attributes having high loadings.

Factor 1 has high loadings on such variables as "chance to explore important ideas", "quality of material emphasized", "friendliness of most faculty", "will- ingness of teachers to talk to students outside of class" and "practice you get in thinking and reasoning". This factor was interpreted as being related to an overall dimension of "quality education" and the process of education.

Factor 2 displays high loading on six variables, such as, "chance to work with members of the opposite sex", "activities and clubs you can join" and "campus events for students". This factor was interpreted as relating to the "social aspects of the program. Factor 3 loads high on "fairness in grading", amount of study required for passing grade" and "chance to do well if you work hard". This was seen as the "evaluation factor". In a similar manner the remaining factors were labeled as follows: Factor 4 (advising). Factor 5 (effort), Factor 6 (preparation) and Factor 7 (facilities).

Once the principle satisfaction dimensions were determined, the next step was to assess their relative importance to overall satisfaction. This analysis is instrumental in identifying the determinate

attributes of student satisfaction and should help the university to understand those features which motivate students to continue in the program. It should also go a long way toward the development of favorable attitudes necessary to build a strong alumni. Because of the crucial relationship between these aspects and satisfaction (see Figures 1), the state of student satisfaction with respect to determinate attributes must be closely examined and monitored to check for any strong or weak areas, as well as, opportunities.

Determinate attributes were estimated through the use of a step wise regression analysis. Iteration for the step wise procedure was allowed to continue until no more entering variables contained coefficients significantly different from zero by an F-test at the .06 level of significance. In Table 2, the predictor variables are listed in order of their contribution to R<sup>2</sup>. As can be seen, there were only two factors of any significance. "Quality of education" was by far the most important, followed by "evaluation".

TABLE 2

REGRESSION FACTOR SCORES ON OVERALL SATISFACTION

Attribute	Beta Coefficient	Cumulative R <sup>2</sup>
1. Quality of education	.14	.51
2. Evaluation	.06	.53

## Discussion

The finding that "quality of education" is the best predictor of student satisfaction is hardly startling news. In fact, this is what was expected since other studies found that college choice and preference were related to school quality of measured by high admissions standards, quality of faculty and the Deans ranking of the top MBA schools (Cook and Zallocco 1070; Punji and Staelin 1978; Vaughn, Pitlik and Hansotia 1978). The second best predictor of student satisfaction, while adding little in contribution to R<sup>2</sup>, is of interest for it suggests that attributes important to satisfaction are not necessarily the same attributes important in college choice. Punji and Staelin, for example, found that such factors as cost, quality and distance of applicant's home from school were important determinants of college choice. It appears that the product, higher education, is quite a complex one, consumed over a long period of time, and that the attributes and their importance differ across each of the nine steps in the student decision process model. If this is the case, it certainly complicates the marketing task for colleges and universities.

It must be pointed out that the two factors which emerged from this sample are quite possible not determinate to satisfaction in other samples. There is no reason to believe that freshmen, sophomores, juniors and seniors at the university will have the same determinate attributes as graduate students. Also, attributes might differ for each class across majors and most certainly would be different from university to university. It means, of course, that what are determinate attributes for one group could be non-determinate for another group. Whatever the case, determinate attribute analysis appears to be a logical tool to help allocate a college's limited resources. If one knows the fund generating

## References

ability of different programs and the determinate attributes of these programs for majors and classes, then one should be better able to allocate existing funds to maximize revenue by maintaining student enrollment in the more profitable programs. This is an area where marketing's contribution to higher education can be significant and one in need of further research.

Another interesting aspect of this study is indicated by the rather low coefficients for the two predictors of students satisfaction. To increase the present level of satisfaction in the school would require an enormous improvement in the "quality of education". On the other hand, however, a rather dismal performance by the faculty would be necessary to effectively lower satisfaction. This suggests that the students enter the program with a rather fixed notion of "quality" which remains quite stable over the duration of their program experience. Therefore, the college marketing efforts used in recruiting and designed to project the image or perception of college "quality", later becomes important to student satisfaction. Image building efforts then are quite important to colleges and research efforts are needed to determine how they can be more effective.

Finally, if the criteria for the interactive step wise procedure is relaxed so that all factors enter the equation, one finds the coefficient for Factor 5, the effort factor, has a negative sign. While it is not significant, it is interesting to note the negative relationship between effort and satisfaction. The implications of this are clear: lower standards/requirements for work and the students are more satisfied with their present educational experience. One might (hope?) interpret this in the present time frame of the student and conclude that it is a natural reaction. Perhaps as students become alumni, this relationship changes, and not only becomes positive, but significant. Maybe the norm for "quality" ought to be one such that there is a strong negative relationship between effort and satisfaction for present students which turns positive for alumni. If this were the case, it would help develop a positive image of quality education occurring at the school. It is another area that seems worthy of further investigation.

## Conclusion

An attempt was made in the study to identify those attributes affecting the students' satisfaction with their educational experience. The findings showed that for one university, the determinant attributes are "quality education" and "evaluation". While care should be taken in generalizing these results due to a relative small sample from a single program at one university, the study does illustrate the importance of student satisfaction to the university's overall marketing effort. The study, by being set within the context of the Kotler Student Decision Process Model, suggests not only the complexity of the higher education product, but areas for further research.

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USING EXPERIENTIAL EXERCISES  
TO TEACH PROFESSIONAL SELLING

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Abstract

Outline

Introduction

Why a paper on experiential learning for selling? What the paper will contain.

Scope

Some discussion of experiential learning in selling. Some discussion of educational objectives.

Sequencing Exercises

Plan of exercises. Operation of exercises. Debriefing of exercises.

Conclusions

Impact of experiential exercises. Feedback from students and trainers.

Introduction

This paper concerns an explanation and evaluation of use of experiential learning exercises in the teaching of professional selling. There are several problems associated with teaching a class at the college level about selling techniques. Two of the more cogent obstacles are: (1) keeping the course focused on generic selling rather than zeroing in on a particular type of selling. (2) keeping the student aimed at skills associated with selling rather than a fully conceptual goal.

In an effort to combat these two basic problems, several experiential exercises were developed. This paper will outline the projects, detail their sequential impact, and evaluate the debriefing and feedback from the projects.

Scope

Involvement is an important aspect of learning any skill. Selling is a skill. Like other skills such as swimming, playing an instrument, etc., selling can be learned. The level of skill attainment for an individual depends on an understanding of the basics, practice of the basics, and proper direction. Experiential exercises supply direction, assist in practice, and serve as reinforcement to understanding.

An experiential project is basically a means of assigning a task which will generate some specific behavior such as that of having a participant accomplishing a definite goal in accord with accepted theory. Participants in experiential exercises gain understanding of principles and theories, gain skills in observing and gain awareness of personal interpersonal strengths and weaknesses.<sup>1</sup>

No one can be assured of becoming a professional expert salesperson with just one course in selling. However,

those who take a course in selling will be better prepared to embark on a selling career and better able to cope with training than those whom must learn by themselves what is expected.

As with any school experience, students involved in experiential exercises have no assurance of learning. Some will have a good time and learn little or nothing. Others will apply more effort to the input and gain more learning as an output. Perhaps the central factor in using an experiential approach is guidance. Organization of experiential exercises around a central theme, in this case selling, generally tends to clarify learning goals and helps stimulate attention.

Memorization of facts and figures will not contribute to a student's learning when selling skills are involved. Selling does not require education. Rather, selling involves practice and learning through observation. Thus, experiential exercises are ideally suited for this type of educational setting.

Selling skills rely on people who have gained knowledge and the ability to apply these skills. Thus, the instructional focus is on the student's cognitive domain. Other domains would be the affective domain dealing with changes of attitudes and appreciations of concepts and the psychomotor domain dealing with manipulative motor skills.<sup>3</sup> Cognitive domain objectives are associated with development of intellectual skills and abilities.

Benjamin Bloom has developed a taxonomy of instructional objectives for the cognitive domain.<sup>3</sup> This Taxonomy provided a concise model for analysis of instructional objectives. Instructional objectives are then developed into instructional modules. Instructional modules are defined as sets of learning activities which are intended to facilitate acquisition and demonstration of competency via student achievement and demonstration of a specified objective or set of objectives. Use of modules helps students proceed at their own pace and lets students supply inputs based on desire to learn and achieve.

In a simplified form the following are the elements of Benjamin Bloom's Taxonomy of Instructional Objectives for the Cognitive Domain:

Knowledge

Knowledge is defined as an ability to recall facts, methods, processes and settings. This is the lowest level in the hierarchy of learning objectives. This objective attempts to link the mind's memory process with appropriate cues, signs, etc.

Comprehension

Comprehension is the student's ability to grasp meaning from material. Translations, condensations, and interpretations are examples of factors for goal attainment.

Application

Application refers to ability to use learned materials in particular and concrete situations. This can be

evidenced by applications of rules, methods, ideas, etc., to special situations.

Analysis

Analysis refers to ability to categorize material which has been learned into clear relationships between various concepts or ideas. Useful instructional processes would call for identification of elements, study of relationships, and/or notice of principles.

Synthesis

Synthesis involves ability to rebuild elements and parts from an entity. Selecting a pattern and rearranging patterns or structures are included in this learning objective set.

Evaluation

Evaluation is an ability to judge values of study materials. Judgements are usually based on some specific criteria. This process requires demonstration of a grasp of skills, can comprehend the meaning of the material, and ability to evaluate and synthesize parts into a viable whole.

Sequencing Exercises

In addition to the aforementioned attention to learning objectives, this set of experiential exercises has been sequenced to permit a logical flow of ideas and effort as the student builds toward a full scale presentation. In a class on professional selling, there are some logical sections for sequencing classroom experiential projects. Students must learn of the selling environment, a salesperson's effort prior to the sale, getting ready to sell, during the presentation, and follow-up. For purposes of this paper, the sequence of exercises aimed at getting the student ready to sell has been selected.

Getting ready to sell involves Time Management, Selling Benefits Rather Than Features, and Pre-approach Data Collection. Before a student can make a sales presentation, there must be an evaluation of management of time, an analysis of product in terms of customer needs, and collection of data so the presentation can be custom tailored for the individual prospect. Each exercise contains learning objectives for the student, procedures for the student, and hints for the student.

The following pages contain the student instructions for the three experiential exercises listed above.

EXERCISE #6  
Time Management

Learning Objectives

1. To help develop a realization of the time = money concept.
2. To help understand that time is the main thing a salesman can control to help him gain more income. Time can be managed.
3. To give students an understanding of some alternatives for time management.

Procedures

1. Keep a log of your daily activity.
2. This process should be done for one week.
3. Make out a sheet as follows:

Left hand column for times of day in 15 minute intervals from 7:00 a.m.-12:00 Midnight. Next a column for activity.

TIME	ACTIVITY	TIME	ACTIVITY
7:00		Noon	
7:15		12:15	
7:30		12:30	
7:45		12:45	
8:00		1:00	
8:15			
etc.			

4. Fill in activity with a brief description such as: eating, studying, dating, TV, in library, between classes, in union.
  5. You should have five sheets (one for each week day) when you come to class for this project.
  6. In groups discuss setting priorities for a plan of time management.
  7. Now make out sheets like the ones you made for the log and fill activity with things you want to do for the coming week.
  8. Now make a list of things you would like to get done next week but don't know exactly when you would like to do them. Assign priorities to these items. Now when you find some free time you can work on one of these items.
- (Questions: would you prefer to work on a top priority item for 15 minutes or to get further along with a lower priority item during the same 15 minutes. Remember, you can't do both.)

EXERCISE #7  
Selling Benefits Not Features Assessment

Learning Objectives

1. Assessment of the feature versus benefit difference.
2. Understanding why benefits should be sold and not features.
3. Identification of a means of preparing to sell benefits.

Advance Preparation

1. Complete the feature chart associated with this exercise.
2. Features will be obtained from sources learned in the section on product knowledge.

Procedures

1. In class you will be given a set of features for a product.
2. As a group (to which you will be assigned) you will determine a means selling one feature by use of the benefit method.
3. After each group has completed determining means of selling benefits of a feature, the entire class will share the means they have determined for selling the several features of the assigned product.
4. You will then be asked to take all of the features of the product you have selected for a full presentation, the product you are going to sell for exercise # \_\_\_\_, or another product and make a detailed chart of the various means for selling the benefits of its features.

Hints

1. This exercise will result in a means of completing a project for which you can earn points. The more you understand, the more you participate, the more you contribute, the better your odds for earning maximum points.
2. This project also is a building block for your final presentation. Effort on this project will have a double payoff.

Use words like, "easy to use, holds bike solid and safe, good looking and functional, no need to rely on public bike racks, makes bike a free standing machine."

Seat

Hit seat with hand.  
 Ask prospect to push on seat to see spring action for shock control.  
 Sit astride bike and ask prospect to do the same.  
 Use words like "comfortable, stylish, long lasting cover, seat saver, etc."

SAMPLE CHART FOR EXERCISE #7  
 Selling Benefits Not Features

Analysis and Combination

Product Feature #1	buying motive #3 buying motive #22 buying motive #8
Product Feature #2	buying motive #1 buying motive #9 buying motive #17 buying motive #26
.	
.	
.	
.	
Product Feature #29	buying motive #2 buying motive #28 buying motive #23 buying motive #12

Example using a bicycle

#6 kick stand	#1 prestige, #2 save time, #7 convenient
#1 light frame	#1 prestige, #14 save energy, #21 adventuresome, #4 obtain good health, #16 provide safety, #19 reduce worry, #6 gain approval of peers, etc.

SAMPLE CHART FOR EXERCISE #7  
 Selling Benefits Not Features

Feature	Plan
Feature #1	language
Feature #2	demonstration
Feature #3	showmanship, etc.
.	
.	
.	
.	
Feature #14	

Example using bicycle as a product

Kick stand	Use stand with foot and hand. Ask prospect to use stand. Show how stand goes in place by use of a string to pull it down. Explain how stand won't let bike fall by breaking string trying to pull stand up to riding position.
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Next feature  
 Next feature

EXERCISE #8  
 Preapproach

Learning Objectives

1. Learning the value of a specially designed presentation.
2. Understanding the pitfalls of getting in to see prospects.
3. Identification of sources of information.

Advance Preparation

This exercise will be completed outside of the classroom. You will be asked to discuss your efforts, successes, and problems when the day comes for it to be evaluated.

Procedures

1. In advance of the due date, you will be assigned or given an opportunity to select a firm for this project.
2. Upon learning the type of firm, you will then proceed to select a specific company. (i.e., your assignment is to gain information on a brewery. Now select a firm such as the Olympic Brewery of Olympia, Washington, or the Busch Brewery of St. Louis, Missouri.)
3. From the material in the text on sources of information, determine which sources you will use to get the information needed to call on this firm.
4. Assume you are selling a product this firm can use and determine:
  - a. who to see
  - b. background about the firm
  - c. size of firm in industry or locale
  - d. strengths of firm
  - e. problems of industry
  - f. location of offices
  - g. is the firm growing
  - h. other information you feel is pertinent

Hint

1. Be sure to keep a record of the sources you used for each bit of information.

Some administrators will let you select your own company. Other administrators will ask you to pick a firm from an assigned type of company or industry. Below are some suggested types of firms:

#### Local:

A auto dealer  
A hardware dealer  
A motorcycle dealer  
Any small retail merchant (not a member of a chain or association)

#### Regional:

A well known regional department store chain  
A well known regional discount house operation  
A well known regional manufacturer

#### National:

An oil company such as Phillips 66, Amoco, etc.  
A railroad  
An airline  
A major trucking company  
A pharmaceutical company such as Richardson Merrill  
A national fast food franchise  
A chemical firm  
A soft drink firm (Coke, Pepsi, etc.)  
A brewery  
A distillery  
An electronics firm  
A manufacturer of food items such as General Mills, General Foods, etc.  
A manufacturer of heavy equipment such as Caterpillar, John Deere, etc.  
A cigarette manufacturer  
A firm manufacturing men's clothing such as Hathaway, Levi, etc.  
A firm manufacturing women's clothing such as L'eggs, Bobby Brooks, etc.  
A firm in the packaging industry  
A firm manufacturing metals such as US Steel, Reynolds Aluminum, etc.  
A car manufacturer  
An airplane manufacturer  
A sporting goods manufacturer  
A shoe manufacturer

When the exercises have been completed and graded, debriefing takes place. This process insures student integration of the material from the exercise and reinforces the learning objectives. Feedback from the debriefing also strengthens further uses of the exercise.

#### Time Management

Here students are directed to look at the time log and see where time could be used that would enable them to get something done they had wanted to do but did not feel there was time enough to accomplish. Students are also asked to look at the control they have over time and reminded of doing what they want to do. Then students are asked to think of things they want to accomplish. Once a listing is obtained, they are asked to set priorities. Now, a further review of the time log lets them see that the use of time is UP TO THE INDIVIDUAL'S PRIORITIES. Once they are able to see that they control their time, they can better understand time management. Finally, students are asked about the alternatives to time management. If the systems suggested are not comfortable, or seem too much trouble, what are the options?

Students usually report that this project lets them have a new view of the value of using time management. Several students who had used some time budget plan usually report better planning through use of time allocations. Students who have graduated and taken sales jobs frequently report that this project was of

great benefit on the job. (Even some who did not use it during school.)

#### Selling Benefits Not Features

First, students come to grips with the difference between features and benefits. Next, they are asked to assess why they should sell to customer needs. This is done in terms of the marketing concept and motives. Finally, identification of a means for preparing to sell benefits is discovered through this project. Here students take product knowledge and an understanding of motivation and synthesize to create a selling plan of action that is versatile and workable.

Debriefing of this project lets students see that this is a very important step in preparing a presentation. Once this process has been completed, the student is ready to plan demonstrations, openings, overcoming objections, and closings with true emphasis on tailoring a presentation to fit a customer's needs.

#### Preapproach

In this exercise the student learns that gathering pre-approach data is relatively easy, dull, and necessary. Necessary if the presentation is to be carefully planned for the customer. Dull because starting a file takes lots of time and requires establishing means for getting basic data. Easy because there are many sources for the data. In fact at first there are almost too many places to look.

Debriefing usually results in comments about the problems of getting to the appropriate source of information. This procedure also highlights a need for systematic data collection.

#### Conclusions

Experiential exercises show students that learning is individual. Points are important and relatively important. Yet, more important is the actual learning which takes place. There is more than lip service to this comment. Many students report with great satisfaction the impact their use of exercises in selling had on the job. Some who undertake formal training find the training time shortened due to the prior exposure to these exercises. Others who do not gain the benefit of formal training report an ability to use the exercise sequencing as a means of systematizing their own development and observations. Finally, several sales trainers have requested the material from certain sequences as a means of taking a fresh tack in some of their sales training sessions.

Once you look at the sales course as a series of modules, it is then possible to establish sequences of material to attain your learning objectives. Learning objectives help students see the direction they are going in your course.

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## INTERNATIONAL MARKETING SEMINAR FOR UNIVERSITY STUDENTS AND BUSINESS PRACTITIONERS

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An International Business Seminar has been conducted successfully for the last four years and is expected to be taught again in the summer of 1981. The purpose of the seminar is to provide both university students and practicing businessmen a better understanding of the international marketing and international business process. International business is becoming increasingly important in today's interdependent world. Over eighty percent of the top U.S. companies are actively engaged in international business. Such diverse companies as General Motors, Coca Cola, IBM, American Express, and Gillette Company perceive foreign markets as being a key component to their future growth in sales and profits. As the U.S. cost for foreign oil increases, so do the importance of American exports and foreign based profits become to this country.

### Scope of the Seminar

The focus of this seminar is to provide the program participants with an on-site exposure to the business environment and business practices found outside the United States. The participants visit a large number of economically important organizations in each country visited. Over the last three years the seminar has studied business practices in the United Kingdom, the Republic of Ireland, Holland, and Yugoslavia. In the future the seminar hopes to include Belgium, France, Guatemala, Puerto Rico, and Trinidad. Every year the seminar visits at least two countries, but no more than four. The participants need to be able to contrast between countries but still stay in any one country long enough to get a feel for the commercial environment found there.

In each country studied, the seminar faculty arranges for the participants to obtain an understanding of the business, economic and political environments. The types of business firms, the business practices, and the management education found in each country are also examined. Special emphasis is put on management and marketing policies, strategies, and organizational structures used for international business dealings.

### Structure of the Program

The seminar averages two visits to organizations a day, five days a week, for three to five weeks, depending on the program. During this time, the seminar members participate in lecture/discussion sessions with officials in various private local firms, government agencies, management training institutions, trade unions, multinational corporations, and local universities. Some of the organizations that have been visited in the past include: London School of Economics, London Stock Exchange, British Petroleum, Wedgwood, Vat 69 Scotch, Clark Shoes, Fry Chocolate, Caterpillar Tractor, Guinness Brewery, Trinity College, ABN Bank of Holland, Dutch School of Economics, Association of Scientific Technical and Management Staff, Bank of Lubjliana, and the Alpin Furniture Factory of Yugoslavia. Several orientation meetings are held with the students before departure to Europe. During these meetings they are given reading material on the countries being studied. The readings cover general information about traveling abroad, more detailed material about some of the specific organizations visited. A text book on international business is also made available.

The seminar is taught by two professors, Dr. Sion Raveed of Southern Illinois University at Carbondale and Dr. Daniel Brenestuhl of Arizona State University. We have found out that there are too many details to be attended to before and during the seminar for one professor to be able to handle effectively. Dr. Raveed is a marketing professor while Dr. Brenestuhl is a management professor. Having two professors with international business expertise but who come from different specialties adds to the learning dimension of the course. The professors' roles are to contact and set up visits to the organization, recruit seminar participants, find the best reading materials, hold integrative discussion sessions and grade those participants taking the seminar for university credit. A participant that pays \$66 tuition, on top of the program costs, reads all the material, is active in the question and answer sessions, and writes a short sum-up paper will earn three units of credit. Those members who want to earn an additional three units must write an in-depth research paper on a topic related to the seminar. The units can be earned as either undergraduate or graduate credit.

### Seminar Promotion and Duration

The experience of the authors is that roughly half of the enrollment for this program come from students who have had one of us for a previous course. The most effective promotion for the course consists of personal presentations by one of the two instructors in front of university classes or a group of businessmen. Slides showing the countries to be visited, the organizations taking part in the seminar, and pictures of past groups are very helpful in promoting the seminar. A well written document explaining the course, a tentative schedule, the cost, and the procedure needed to enroll in the course is also needed. On the other hand, a general mailing describing the course to hundreds of universities proved to be an expensive but useful exercise. Posters, handing out large numbers of leaflets, and stories in the university student newspapers have some, but only marginal usefulness. Stories in local newspapers and alumni newsletters are helpful in attracting businessmen. A promotional program as described above should be strong enough to recruit a full seminar, given that the cost is held down to under \$2,000 for four weeks. It is especially successful with university students since they can get a low interest government guaranteed loan to pay for the seminar. Over the last four years the seminar has had 32, 35, 40 and 50 participants, respectively. Thirty to forty participants tend to be ideal. It provides enough members to spread out the course overhead but is still manageable.

During the first year of the International Business Seminar the overseas part of the course lasted three weeks. We found this too short a period for all the effort and expense put into the trip. The second year the overseas portion lasted four weeks. The third year the students had a option of four or five weeks. We found four weeks to be quite adequate in length of time. By the end of four weeks the participants were still learning. The fifth week was added to accommodate those members that want more depth and diversity of organizations to be visited.

## Evaluation

At the end of each year's program, seminar members were asked to anonymously evaluate the seminar as a whole and each organization that was "visited." The participants have been nearly unanimous in their strongly positive rating of the course. Over 95% said they would highly recommend the seminar to their friends or any other potential seminar participants. They have also rated the presentations of most organizations very highly. This is due to the tremendous support our local hosts have given us. Nearly all of the organizations have provided one to three middle to top level operating executives. They have tended to make presentations which last for one half to one and a half hours and then follow this with a question and answer period of one to two hours. These in-depth presentations have impressed the people taking the seminar. Less than 20% have been given low ratings. These are dropped from next year's seminar, even if we visit the same country. The participants often make comments. The comments tend to stress the importance of being immersed in the foreign culture as a precondition to really learning about international business practices in that culture. It should not take the collapse of the dollar as a strong world currency to make us see the advantages of the United States expanding its export operations. Thus, the usefulness of international business oriented seminars. They are useful in introducing people to foreign business environments, international business techniques, and in reducing the ethnocentric viewpoint of those Americans who are, or will soon be, business managers.

DIMENSIONS OF CAREER CHOICE CONSIDERATIONS FOR  
MALE AND FEMALE BUSINESS STUDENTS

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Introduction

A problem facing today's business firms is attracting and retaining the better quality graduates. An important task, therefore, is to identify and make provision for those students' career expectations. The findings in this research identify important career expectations and indicate that there are potentially important differences between females' and males' expectations.

In 1947 Jurgensen found that there were some distinguishable factors which could have an influence on people's job preference. In the work that followed the major research focused on male respondents preference factors typically using actual and prospective job applicants (Jager, 1955; Almquist, 1970; and Braunstein 1968). It was in the 50's that research on women's perceptions of occupations began to appear. The first such studies concluded that women sought opportunities to be of service to others (Brayfield, 1957) while men preferred such factors as status, responsibility and independence from authority (Bendig, 1958). Singer and Steffire (1954) found that traditional male dominance, female dependency roles were strong factors in job preference criteria; the research by Wagman (Wagman, 1965) concluded that men and women differed with respect to only two preference factors: men desired esteem and women desired social service opportunities. Wagman's conclusions, however, may have been tainted by what is currently called overt male chauvinism. That bias is found in his statement that "obviously, to take a job where one can be of help to others is indeed in keeping with what we know of feminine strivings, even if the competitive occupational role of women in our society is undergoing rapid acceleration" Brayfield, 1957).

The research conducted in the 1970's began to reflect some of the changes in feminine expectations. Keith and Glass (1977) found that men and women did not differ with respect to people oriented values such as working with or serving others. In terms of extrinsic rewards he found that men placed greater importance on salary, social status and prestige, opportunities for advancement and fringe benefits. This finding was contrary to Centers and Bugental (1966) who found that men and women did not differ in emphasis placed on pay and security. Although Keith and Glass (1977) found some similarities in expectations among males and females, they conclude that their data "suggest caution in accepting the existence of a ground swell of nontraditional work values among women.

The changing mores of the 70's and 80's which permit or encourage women to work outside the home (or in the case of inflation may require that role if life styles are to be maintained) have begun to have an affect on women's job expectations. McLaughlin (1967) concluded that women have acquired work orientations similar to the work aspirations held by men. Strong correlations, however, existed between socioeconomic backgrounds and those aspirations. Women from medium and high social class socioeconomic backgrounds were more

likely to have expectations similar to men, while those with lower class socioeconomic backgrounds tended to pursue more traditional goals.

Those women who seek non-traditional occupations appear to have distinctive characteristics and equally distinct expectations. There is research to support the idea that women in non-traditional occupations may be sufficiently motivated by the perceived intrinsic rewards available to defy standard sex role norms (Almquist, 1970).

In today's colleges there is an increasing trend for better quality female and male students to pursue careers in the professions. The movement of those students away from liberal arts curriculums and into business school is well documented (Time, 1980). The problem facing the business firm attempting to attract those students when they graduate is the need to identify and make provision for the career expectations that those students are searching for in their first jobs. That information would serve two purposes. First, to attract the top candidates to the firm and second, aid the firm in making provisions for the students to actually receive the work experiences and rewards which they seek. The "wall of misunderstanding and the first job" as identified by Schein (1967) is still a significant factor in the high turnover of college graduates in their first jobs.

The first objective of this research is to examine salient choice attributes of marketing as a career to determine whether or not there are differences in terms of male and female student's perceptions of what a marketing career might offer them. This aspect of the study is intended to update and expand on the historical literature on male and female expectations relative to career benefit expectations.

The second objective of this study is to examine those same salient choice criteria to determine whether or not there is evidence to indicate that students change their expectations as they progress through the formative freshman and sophomore years of college. During this period the declared business major is exposed to a variety of introductory business courses and may in the process clarify or perhaps shift their perceptions.

The hypotheses for this study are derived from the above objectives. Those hypotheses are:

H<sub>01</sub>: There is no difference between male and female business student's perceptions of marketing as a career on the three factor dimensions of freedom, growth, and significance.

H<sub>02</sub>: There is no difference between freshmen and sophomore business student's perceptions of marketing as a career on the three dimensions of freedom, growth, and significance.

Methodology

The research instrument used in this study consisted of twelve semantic differential scales. It was originally developed by Summey (1979). For this study the instru-

ment was used to study the 1978 population of female and male business students at a large state university.

Tests of hypothesis for this study use two way analysis of variance of the three factor dimensions. The data are also broken down into a profile analysis so that the variation between the study groups may be observed.

### Results

The results of the analysis of variance procedure are presented in Table 1. These data indicate that there are statistically significant differences for male and female students on the factors of growth and significance (alpha = .05). There is no significant difference, however, on the factor of freedom. The profile of mean response on each scale for males and females appears in Figure 1.

The analysis of the data for freshmen and sophomore students indicates that there is no statistically significant difference between the two groups on any of the three factors (alpha = .05). Examination of the interaction between class and sex indicates that there is no statistically significant interaction between sex and class (alpha = .05). The profile of the mean response on each scale appears in Figure 2.

FIGURE 1

### PROFILE OF MEAN RESPONSES BY SEX\*

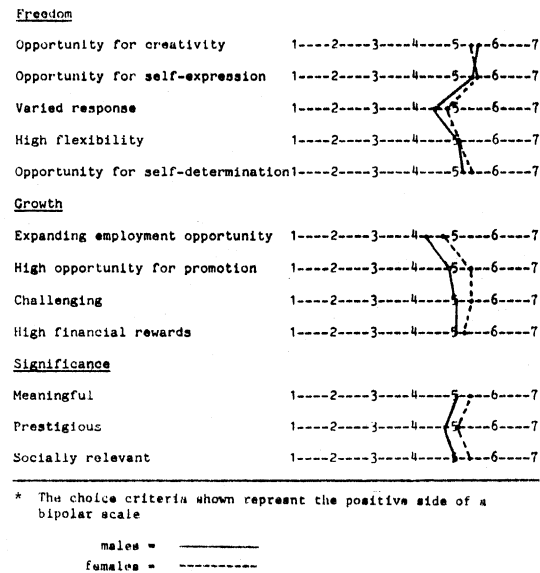


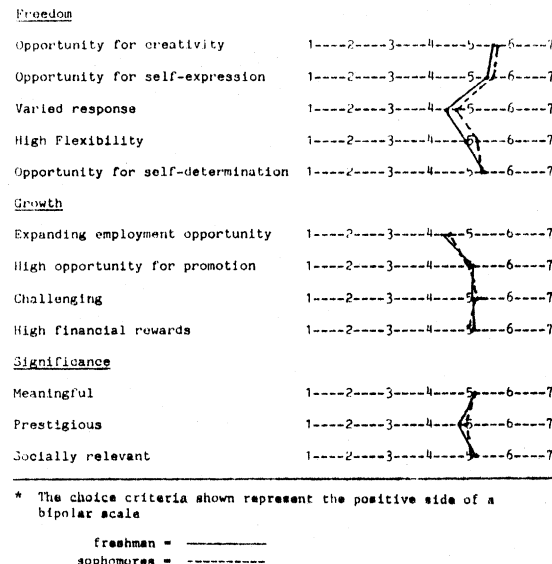
TABLE 1  
ANALYSIS OF VARIANCE ON EACH FACTOR

FACTOR 1					
Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	3.272	2	1.636	1.887	.126
class	2.444	1	2.444	2.372	.124
sex	1.014	1	1.014	.984	.322
Interaction	2.813	1	2.813	2.729	.099
Explained	6.084	3	2.028	1.968	.118
Residual	419.496	407	1.031		
TOTAL	425.581	410	1.038		
FACTOR 2					
Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	11.974	2	5.987	5.496	.004
class	.982	1	.982	.901	.343
sex	11.369	1	11.369	10.436	.001
Interaction	3.558	1	3.558	3.286	.071
Explained	15.532	3	5.177	4.763	.003
Residual	443.366	407	1.089		
TOTAL	458.898	410	1.119		
FACTOR 3					
Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	F	Significance of F
Main Effects	6.901	2	3.450	3.091	.047
class	.051	1	.051	.046	.830
sex	6.897	1	6.897	6.897	.013
Interaction	1.735	1	1.735	1.555	.213
Explained	8.636	3	2.879	2.579	.058
Residual	454.361	407	1.116		
TOTAL	462.998	410	1.129		

### Discussion

The test of the first hypothesis provided information which does in fact extend the literature in terms of the female student's expectations for their job environment. These students, who were sampled from across all possible business majors were statistically equal to the male respondents in terms of their expectations for personal freedom in the job environment. On the dimension of growth and of significance, however, they exceeded the males in their expectations on all variables. In terms of personal growth it appears that they may recognize that their opportunities for employment were expanding at a greater rate than they were for males and that rewards in the form of promotion and pay would be present. They also recognized that the field would be challenging but tied to the challenge was the expectation of reward.

PROFILE OF MEAN RESPONSES BY CLASS\*



The dimension of significance is interesting because it seems to indicate that the female respondent attached higher importance to their role as business people than did the males. One must be careful in analyzing this result to avoid attaching traditional stereotyped interpretations to this finding. Given the social context in which this data was collected, it would appear that the females may be recognizing or anticipating the increased opportunity to make a contribution to society in a context in which they had been excluded in the past. This conclusion is derived from their perceptions of marketing careers as being more prestigious, meaningful and socially relevant than it was perceived to be by the male respondents.

The second hypothesis test on academic class indicates that there is a high degree of consistency at this point in time in terms of students expectations once they arrive at college. The absence of shifts over time in perceptions and the absence of interaction between sex and academic class indicate that male and female expectations are paralleling each other with the females perceptions being somewhat more favorable

in terms of their expectations than are the males.

#### Conclusions

Firms seeking to recruit business students, both female and male, need to be aware of the aspects of potential career which students evaluate and to which they attach importance when they evaluate a job opportunity. It is particularly important that they are aware of these criteria and their importance when dealing with female candidates. If employers attempt to attract the latter using outdated notions of female's intentions and desires relative to what they expect to receive or achieve within the job environment, they are merely fueling the expensive fire of rapid turnover of first job employees. It is important that prospective employers use criteria such as those developed for this study in putting together the promotional materials that will be used to attract college students to seek employment at their firms. It is more important, however, that steps be taken to insure that the expectations expressed by these candidates are realized in the job environment that the promotional materials promised.

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THE IMPORTANCE OF CONSUMER BEHAVIOR COMPARED TO OTHER BUSINESS COURSES

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Twenty years ago consumer behavior was a new idea in the marketing curriculum of American colleges. Since then the course has increased in popularity. This propensity to install a consumer behavior course has paralleled the acceptance, by scholars and practitioners, of consumer orientation, i.e., the consumer must be satisfied at a profit. One assumes that as the consumer behavior course increased in popularity within marketing departments that the attitude of educators toward its relative importance would change. As a matter of fact, one result appears dependent upon the other.

The assumption is that consumer behavior is perceived more favorably, compared to other marketing and business courses, since its general popularity has increased. Specifically, the hypothesis under investigation in this study is that:

1. The consumer behavior course is perceived as more important by marketing professors than typical business core courses.
2. The consumer behavior course is perceived by marketing professors as more important than typical marketing core courses.
3. The rank of the respondent affect the perception of consumer behavior relative to "other" business core and marketing courses.

Methodology and Sample Composition

A three-page questionnaire was developed with testing and refining being done at a large midwest university. A total of 490 questionnaires were sent out to every seventh marketing professor, by schools, from the roles of the American Marketing Association. No schools were duplicated in sample. Each of the professors chosen received the questionnaire along with a cover letter requesting their participation. Neither prior notification of the receipt of a questionnaire, nor follow-up letters were used. Nine of the 490 questionnaires were returned as undeliverable. Of the remaining 481 questionnaires, a total of 153 usable ones were returned; this represents 30.81 percent of the total.

Table 1 contains a summary of the composition of the sample. Professors and Associate Professors accounted for 68 percent of the respondents. These two categories were evenly divided in the sample. As might be expected instructors did not constitute a large group. Respondents were about evenly divided among the regions. Given national population distribution, this result was expected. The northeast was less represented than one might expect based on population figures. More respondents came from schools of less than 5,000 than from other groups. Schools from 5,000-15,000 comprised 41.89 percent of the sample and schools above 15,000 comprised 24.27 percent of the total. The respondents were about evenly divided between AACSB and non-AACSB schools. All in all, the sample appears reasonably representative of the general population of university teachers in the United States.

TABLE 1  
 COMPOSITION OF THE SAMPLE

	Number	%
Rank of Respondents		
Professor	52	34.0
Associate Professor	52	34.0
Assistant Professor	42	27.4
Instructor	7	4.6
Totals	153	100.0
Geographic Location of Respondents		
Northeast	28	18.3
Midwest	49	32.0
Southeast	36	23.5
Southwest	20	13.1
West	18	11.8
Non-responses	2	1.3
Totals	153	100.0
Respondents by Size of School		
Less than 5,000	52	34.0
5,000 to 10,000	36	23.5
10,000 to 15,000	28	18.3
15,000 to 20,000	16	10.5
Over 20,000	21	13.7
Totals	153	100.0
AACSB Accredited and Non-Accredited Schools		
AACSB Accredited	72	47.1
Not AACSB Accredited	77	50.3
Non-responses	4	2.6
Totals	153	100.0

Result of the Study

Table contains a comparison of the attitudes of marketing educators toward the consumer course relative to courses that are typically within the business core. A chi-square test was done to compare significance of responses. Nine of the seventeen courses were found to be statistically more important than consumer behavior. Five of the courses were found to be of approximately equal importance as the consumer behavior course. The remaining three courses were judged to have less importance than consumer behavior.

In general, courses that are basic or introductory within fields were considered to be more important than consumer behavior. A notable example is business policy; it is a capstone course and its perceived importance is understandable. Thus the evidence does not support the hypothesis that marketers perceive consumer behavior as more important than typical core courses. However, the evidence does strongly support that a change in attitude is taking place among marketing educators. Marketers considered consumer behavior as



TABLE 2  
CONSUMER BEHAVIOR COMPARED TO TYPICAL BUSINESS CORE COURSES

Course Name	Importance of Consumer Behavior Relative To the Compared Course				X <sup>2</sup>	Compared Importance To Consumer Behavior
	More Important	About the Same In Importance	Less Important			
Principles of Accounting	14	33	102	66.76***	Greater	
Advanced Accounting	58	59	31	8.19**	Less	
Cost Accounting	53	60	35	3.68	Equal	
Data Processing	23	57	70	23.75***	Greater	
Principles Statistics	18	48	83	41.83***	Greater	
Advanced Statistics	60	63	24	15.42***	Less	
Principles of Management	15	48	86	49.91***	Greater	
Organizational Management	35	72	41	.47	Equal	
Production Management	50	58	40	1.11	Equal	
Business Policy	23	49	77	29.16***	Greater	
Report and Letter Writing	44	42	61	2.75	Equal	
Principles of Marketing	7	41	103	83.78***	Greater	
Marketing Research	14	82	54	23.52***	Greater	
Business Law, Legal Environment	23	64	63	11.46***	Greater	
Introduction to Finance	15	43	92	38.37***	Greater	
Money and Banking	54	60	36	3.60	Equal	
Investment	68	66	15	33.84***	Less	

\*Significant  $\alpha = .001$ ; \*\*Significant  $\alpha = .01$ ; \*\*\*Significant  $\alpha = .05$ .  
Source: Original Data

TABLE 3  
CONSUMER BEHAVIOR COMPARED TO TYPICAL MARKETING CORE COURSES

Course Name	Importance of Consumer Behavior Relative To the Compared Course				X <sup>2</sup>	Compared Importance To Consumer Behavior
	More Importance	About the Same In Importance	Less Important			
Principle of Marketing	7	41	103	83.78***	Greater	
Marketing Research	14	82	54	23.58***	Greater	
Marketing Policy	42	74	34	.84	Equal	
Marketing Channels	65	70	16	29.64***	Less	
International Marketing	84	54	13	51.97***	Less	
Transportation	98	40	13	65.09***	Less	
Promotion or Advertising	31	96	23	1.19	Equal	
Retailing	68	67	16	32.19***	Less	
Sales Management	67	68	16	31.27***	Less	
Industrial Marketing	80	58	13	48.27***	Less	
Purchasing	105	39	7	85.73***	Less	
Salesmanship	94	44	13	74.03***	Less	
Logistics	89	49	12	58.70***	Less	
Wholesaling	104	39	8	82.29***	Less	

\*Significant  $\alpha = .001$ ; \*\*Significant  $\alpha = .01$ ; \*\*\*Significant  $\alpha = .05$ .  
Source: Original Data

important as or more important than 47 percent of all business core courses. Yet, consumer behavior is not typically a core course. It is perhaps fair to say that many marketers would like to see consumer behavior included in the business core.

Table 3 contains a comparison of the importance of the consumer behavior course to other typical marketing core courses. Chi-square tests were used to test significance. Only two courses, principles of marketing and marketing research, were deemed by marketers to be more important than consumer behavior. While the marketing policy course was considered approximately the equal of consumer behavior, all other courses were found to be less important. Thus, consumer behavior has become one of

most important courses in the minds of marketers. This fact is reflected in the findings that 76.5 percent of all schools surveyed had a consumer course in the marketing department. However, only 3.2 percent of the schools required students to take this course. In any event, the second hypothesis is supported, and marketers today certainly have a most favorable attitude toward the consumer behavior course.

The importance of consumer behavior compared to the business core by academic rank of the respondents is shown in Table 4. Two courses, principles of accounting and marketing research were found to be evaluated statistically different among the various academic ranks. The lower academic ranks, which presumably are younger professors, gave more relative importance to the consumer behavior course compared to statistics and accounting; than did the older professors. This finding probably reflects the fact that there was a definite trend, percentagewise, for lower academic ranks to evaluate consumer behavior more favorably. This tendency follows through all core courses. These facts support the third hypothesis that academic rank affect the professor's attitude toward consumer behavior. If the trend follows it is even more favorably perceived in the future.

Table 5 shows the results of the comparison of the consumer behavior course to other marketing core courses by the academic rank of the respondent. Two courses, marketing research and logistics, were found to exhibit statistically significant differences. Both of these courses were rated by lower academic ranks to be of comparatively less importance than consumer behavior. Again, there was a trend for younger professors to comparatively rate consumer behavior higher than did the senior professors, and they also lend credence to the third hypothesis.

The importance of consumer behavior relative to courses in the business core (broken down by the size of school represented) is shown in Table 6. Five courses, data processing, organizational management, report and letter writing, principles of marketing, and money and banking, were all found to be ranked statistically different between the school sizes. Smaller schools indicated that these courses were comparatively more important than consumer behavior. In general, there was a trend for smaller schools to place relatively less importance on consumer behavior than did the larger schools. This tends to support the third hypothesis that school size affects the perception of consumer behavior. The reason may be that smaller schools are more technique and less consumer oriented than larger schools. It may also be that smaller schools, that teach fewer courses, consider consumer behavior a luxury course to be taught only when the more traditional marketing courses have been covered.

### Implications and Conclusions

The consumer behavior course has come a long way in twenty years. If the perceived importance of the course when compared to other courses, is an indicator, then consumer behavior will continue to grow in adoptions and enrollments. This study found that marketing educators considered the consumer behavior course to be at least as important as nearly half of the courses that are typically found in the business core. Certainly on the basis of this finding there could be a strong argument raised for the inclusion of the consumer behavior course in the business core. This action would be consistent with the marketing concept, as the business school implementation of this philosophy should logically have the requirement of a consumer behavior course for all business students.

Consumer behavior was also found to be more important than all but two courses that are often found among the offerings of marketing departments. If trend does not surface for consumer behavior to be included in the business core, then marketing educators should push for the course to be a requirement for all marketing students.

fessors to view consumer behavior more favorably than their older counterparts. This is not overly surprising as the younger professors are more likely to have had greater exposure to the course as it has probably been an integral part of their educational experience. Thus the course should receive more support as the assistant professors of today move up in rank and become more important within their schools.

There appears to be a definite trend for younger pro-

TABLE 4  
COURSE BY ACADEMIC RANK OF RESPONDENTS

Course Name	Importance of Consumer Behavior Relative to Compared Course												χ <sup>2</sup>
	Instructor			Assistant Professor			Associate Professor			Professor			
	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	
Principles of Accounting	1	2	4	8	10	23	3	12	37	2	9	38	13.24*
Advanced Accounting	3	1	3	18	17	6	20	20	11	17	21	11	6.01
Cost Accounting	2	2	3	18	15	8	15	21	15	18	22	9	6.49
Data Processing	1	2	4	5	19	17	9	17	26	8	19	23	4.44
Principles of Statistics	2	1	4	9	12	19	3	19	30	4	16	30	11.99
Advanced Statistics	4	1	2	19	17	5	21	19	11	16	26	6	10.04
Principles of Management	0	3	4	8	13	20	4	16	32	3	16	30	10.12
Organizational Management	1	2	4	10	23	8	10	24	17	14	23	12	7.95
Production Management	1	5	0	15	17	9	15	17	19	19	19	12	11.43
Business Policy	0	4	3	10	12	19	6	15	30	7	18	25	7.02
Report and Letter Writing	0	3	3	12	10	18	17	12	22	15	17	18	7.06
Principles of Marketing	0	2	5	3	13	25	3	12	37	1	14	36	4.27
Marketing Research	0	3	3	6	25	10	7	26	19	1	28	22	15.34*
Business Law, Legal Environment	0	4	3	9	18	14	6	19	27	8	23	19	7.94
Introduction to Finance	1	1	5	8	11	22	3	16	33	3	15	32	9.02
Money and Banking	1	4	2	16	15	10	16	24	12	21	17	12	5.78
Investments	2	3	2	19	17	5	23	23	5	24	23	3	4.69

\* = .05

TABLE 7  
CONSUMER BEHAVIOR COMPARED TO TYPICAL MARKETING CORE COURSES BY SIZE OF SCHOOL

Course Name	Importance of Consumer Behavior Relative to Compared Course															χ <sup>2</sup>
	Less than 5,000			5,000,10,000			10,000,15,000			15,000-20,000			More than 20,000			
	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	
Principles of Marketing	2	15	33	1	8	27	0	6	22	0	7	9	4	5	12	19.85*
Marketing Research	6	27	17	2	19	15	2	14	11	1	10	5	3	12	6	5.82
Marketing Policies	12	25	13	13	18	5	9	14	5	4	7	5	4	10	6	8.12
Marketing Channels	21	21	8	19	15	2	9	18	1	7	7	2	9	9	3	11.82
International Marketing	25	17	8	21	14	1	15	11	2	10	6	0	13	6	2	11.15
Transportation	31	10	9	25	10	1	14	12	2	12	4	0	16	4	1	18.15*
Promotion or Advertising	6	34	10	9	22	5	7	16	4	6	9	1	3	15	3	10.18
Retailing	20	25	5	17	16	3	15	8	5	7	9	0	9	9	3	10.80
Sales Management	19	23	8	21	12	3	12	13	3	8	7	1	7	13	1	11.67
Industrial Marketing	22	21	7	22	13	1	15	9	4	10	6	0	11	9	1	11.94
Purchasing	30	14	6	26	10	0	21	6	1	12	4	0	16	5	0	14.83
Salesmanship	25	17	8	21	12	3	20	7	1	12	4	0	16	4	1	13.98
Logistics	28	12	9	22	14	0	16	11	1	11	5	0	12	7	2	19.41*
Wholesaling	27	17	6	25	11	0	22	6	0	14	2	0	16	3	2	20.01*

\*Significant = .05

TABLE 5  
CONSUMER BEHAVIOR COMPARED TO TYPICAL MARKETING CORE COURSES IN ACADEMIC RANK OF RESPONDENTS

Course Name	Importance of Consumer Behavior Relative to Compared Course												X <sup>2</sup>
	Instructor			Assistant Professor			Associate Professor			Professor			
	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	
Principle of Marketing	0	2	5	3	13	25	3	12	37	1	14	36	4.26
Marketing Research	0	3	3	6	25	10	7	26	19	1	28	22	15.34*
Marketing Policies	1	5	1	12	21	7	19	19	14	10	29	12	10.35
Marketing Channels	2	4	1	20	19	2	28	18	6	15	29	7	10.39
International Marketing	3	3	1	25	14	2	31	18	3	25	19	7	5.41
Transportation	3	4	0	27	11	3	37	8	7	31	17	3	10.73
Promotion or Advertising	0	5	2	9	27	5	14	30	8	8	34	8	6.84
Retailing	2	3	2	20	16	5	23	26	3	23	22	6	6.01
Sales Management	1	4	2	21	17	3	26	22	4	19	25	7	8.21
Industrial Marketing	3	3	1	26	14	1	29	17	6	22	24	5	7.62
Purchasing	4	3	0	31	9	1	29	17	6	22	24	5	5.26
Salesmanship	3	4	0	31	6	4	31	16	5	29	18	4	9.50
Logistics	3	3	0	26	14	1	34	12	6	26	20	5	3.44*
Wholesaling	3	4	0	29	10	2	38	11	3	34	14	3	5.86

\*Significant = .05

TABLE 6  
CONSUMER BEHAVIOR COMPARED TO TYPICAL BUSINESS CORE COURSES BY SIZE

Course Name	Importance of Consumer Behavior Relative to Compared Course															X <sup>2</sup>
	Less than 5,000			5,000-10,000			10,000-15,000			15,000-20,000			More than 20,000			
	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	More Important	About the Same	Less Important	
Principles of Accounting	3	9	38	3	7	25	3	4	20	1	6	9	4	7	10	15.43
Advanced Accounting	18	21	13	16	15	5	7	13	7	10	5	1	10	5	5	13.96
Cost Accounting	14	19	16	12	18	6	9	10	8	8	6	2	10	7	3	28.89**
Data Processing	4	15	31	4	15	17	5	7	15	2	10	4	8	10	3	13.22
Principles of Statistics	5	15	30	4	9	22	3	7	17	1	10	5	5	7	9	9.45
Advanced Statistics	17	21	10	12	16	7	11	12	4	9	6	2	11	9	1	12.51
Principles of Management	3	17	29	3	9	24	2	10	15	2	7	7	5	5	11	12.51
Organizational Management	7	25	16	12	14	10	3	19	5	5	8	3	8	6	7	20.20*
Production Management	11	22	16	13	13	10	10	10	6	6	9	1	10	4	7	15.80
Business Policy	6	16	28	9	9	17	1	10	16	4	4	8	3	10	8	11.30
Report and Letter Writing	10	12	2	10	15	11	7	7	12	7	3	6	10	5	6	17.62*
Principles of Marketing	2	15	33	1	8	27	0	6	22	0	7	9	4	5	12	19.85*
Marketing Research	6	27	17	2	19	15	2	14	11	1	10	5	3	12	6	5.82
Business Law and Legal Environment	6	20	24	4	18	14	5	8	14	4	8	4	4	10	7	9.50
Introduction to Finance	4	12	34	4	9	23	1	8	18	1	7	8	5	7	9	12.47
Money and Banking	12	18	20	12	17	7	9	16	2	10	2	4	11	7	3	25.57**
Investments	20	20	9	15	19	2	14	10	3	0	7	1	11	10	0	12.90

\*Significant = .01  
\*\*Significant = .05

FREQUENT VS. INFREQUENT FLYERS:  
AN EXAMPLE OF PERCEPTUAL SEGMENTATION

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Abstract

The Airline Deregulation Act of 1978 has provided impetus for airline industry competitors to become more consumer oriented rather than product oriented. Central to the issue of competitor positioning are perceptual configurations of consumer segments relative to carrier service attributes. Utilizing service attributes via consumer consciousness, competitors may define more accurately their positions in the market place as well as providing for the development of effective attribute related marketing policy.

Introduction

The Airline Deregulation Act of 1978 has created an emerging market environment that has witnessed a strong focus upon competitive strengths among industry participants (Klem, 1978; Loving, 1977). More specifically, provisions of the Deregulation Act establish more freedom for participants relative to pricing, routing, and scheduling, and substantially impact upon federal subsidy programs (Loving, 1977). Therefore, the establishment of policy related alterations in corporate marketing will likely prevail.

Under the provisions of the Federal Aviation Act of 1958, industry competitors have been subject to tariffs and transport rates of persons, cargo, and mail as well as consolidation, merger and acquisition controls. However, the emerging environment is one of relaxation and eventual independence from Civil Aeronautics Board controls. As such, each competitor will tend to establish marketing policy and programs that will sustain current positions and/or provide for growth.

It is conceivable that industry competitors may become more consumer oriented as a result of this legislation (Narodick, 1972; Narodick, 1972). As such, consumer perceptions in the form of attention, exposure, and interpretation of competitor information is central to (1) comprehending competitive market position and (2) developing strategy programs directed at capitalizing upon identified consumer differences (Hawkins, 1980; Klem, 1978). Moreover, perceptual readiness of consumers may vary such that some flyer groups will likely possess preferences as a result of many air travel experiences whereas other groups will have poorly established evaluative criteria upon which a choice may occur (Bruner, 1957). Therefore, it becomes important that marketing managers of industry competitors assist consumers in categorizing available competitive service information such that effective position of individual carriers may result (Joyce, 1966). Inasmuch as consumers tend to interpret stimuli consistently with expectations, it becomes obvious that airline marketing must establish a frame of reference for the consuming public relative to the criteria utilized in an evaluative process.

This paper addresses the question: What attributes are related to consumer evaluation of airline industry competitors and can those attributes be useful in

subdividing the global market? It is herein assumed that the air travel market is a heterogeneous market and that the heterogeneous market can be subdivided with regard to life-style covariates relating consumer consciousness to carrier service attributes.

Methodology

Stapleton International Airport in Denver, Colorado was selected as the sample frame for the study herein reported. Stapleton International is served by trunk, regional, and local carriers and provides a major access and exchange point for eastern and western bound flyers.

Ninety-nine travelers were randomly selected in November, 1979 for participation in a 26 minute personal interview. Time-of-day and day-of-week were randomized to control for traveler bias. Moreover, location of interview was also randomized in an effort to control for carrier selection bias.

Each respondent was requested to explain the purpose of his or her major reason for travel thus providing for the subdivision of the total sample into frequently versus infrequently oriented flyers. Moreover, each respondent was requested to respond to psychographic statements relating to the following focus group generated attributes utilized in air carrier selection: (1) price consciousness, (2) pilot involvement consciousness, (3) food service consciousness, (4) stewardess consciousness, (5) schedule consciousness, (6) reservation consciousness, (7) promptness consciousness, (8) baggage handling consciousness, (9) terminal service consciousness, (10) comfort consciousness, (11) beverage service consciousness, (12) travel agent consciousness, and (13) advertising consciousness. Demographic characteristics including sex, age, marital status, education, occupation, and income were also recorded.

Analysis of the data was accomplished in two steps: (1) First, the data were subdivided into frequent and infrequent flyer groups and a frequency distribution analysis resulting in measures of central tendency and dispersion was performed. (2) Secondly, the data were analyzed via a hierarchical clustering utilizing minimum Euclidean distance as the linkage measure.

Results

**Table I** exhibits the results of a split-half reliability analysis of the thirteen life-style covariates utilized in this study. Split-half coefficients ranging from .581 (comfort consciousness) to .880 (beverage service consciousness) indicate relatively reliable measurement of the covariates. **Table II** represents central tendency and dispersion measures relating to the covariates. Casual observation suggests that differences between frequent and infrequent flyers do exist on the variables of interest.

**Figure I** represents the graphic result of a hierarchical clustering of airline passenger life-style

TABLE I  
LIFE-STYLE CONSTRUCTS, SAMPLE STATEMENTS, NUMBER OF SCALES IN EACH CONSTRUCT, AND  
SPLIT-HALF RELIABILITY COEFFICIENTS FOR A SAMPLE OF 99 AIR TRAVELERS

Life-Style Constructs	Sample Statement	Number of Scales	Split- Half
Price Conscious	Price is the most important factor in selecting an airline.	4	.769
Pilot Involvement Conscious	I like to hear the pilot talk to passengers while the airplane is in flight.	3	.595
Food Service Conscious	I always want to be served a meal when I fly.	4	.798
Stewardess Conscious	I select airlines for travel because of their stewardesses.	3	.677
Schedule Conscious	I will select an airline because of its convenient schedule.	4	.834
Reservation Service Conscious	I always use an airline reservation service when making air travel plans.	4	.835
Promptness Conscious	On-time service is the most important factor in my selection of an airline.	4	.607
Baggage Handling Conscious	Baggage handling is the most important factor in my selection of an airline.	4	.762
Terminal Service Conscious	I like to be met by a gate agent when I am changing flights at the airport.	3	.734
Comfort Conscious	Aircraft comfort is the most important factor in my selection of an air carrier.	3	.581
Beverage Service Conscious	I like to have beverage service on every flight I take.	4	.880
Travel Agent Oriented	Travel agents always suggest the best air carriers for their customers.	4	.810
Advertising Conscious	I like to fly on those airlines for which I have seen advertising.	3	.664

TABLE II  
MEANS, STANDARD DEVIATIONS AND RANGES OF LIFE-STYLE COVARIATES OF TOTAL SAMPLE, FREQUENT FLYER SAMPLE,  
AND INFREQUENT FLYER SAMPLE

Life-Style Covariates	Total Sample (n=99)				Frequent (n=55)				Infrequent (n=44)			
	Mean	Standard Deviation	Min	Max	Mean	Standard Deviation	Min	Max	Mean	Standard Deviation	Min	Max
Price Conscious	15.76	4.23	6	24	13.45	3.71	6	24	18.43	3.06	10	24
Pilot Involvement Conscious	11.91	2.73	5	17	11.60	2.74	5	16	12.30	2.69	6	17
Food Service Conscious	13.90	3.74	7	24	13.31	3.82	8	24	14.64	3.54	7	20
Stewardess Conscious	7.74	2.66	4	15	7.46	2.53	4	14	8.09	2.80	4	15
Schedule Conscious	18.79	3.19	12	24	20.00	2.70	13	24	17.27	3.12	12	24
Reservation Conscious	16.10	4.41	5	24	15.27	4.85	5	22	17.14	3.58	7	24
Promptness Conscious	15.94	2.72	7	23	16.58	2.65	10	23	15.14	2.61	7	21
Baggage Handling Conscious	13.94	3.50	6	21	14.02	3.96	6	21	13.84	2.87	8	19
Terminal Service Conscious	11.43	2.65	5	17	12.11	2.62	6	17	10.59	2.45	5	15
Comfort Conscious	12.01	2.38	6	17	12.31	2.41	6	17	11.64	2.32	6	17
Beverage Conscious	14.77	4.53	4	24	14.11	4.14	6	20	15.59	4.90	4	24
Travel Agent Oriented	15.50	4.43	7	24	16.07	4.45	7	24	14.77	4.34	9	23
Advertising Conscious	8.04	2.58	3	14	7.29	2.34	3	12	8.98	2.57	3	14



covariates. Two grand clusters are derived that provide evidence of at least two possible market positioning strategies: (1) the inflight service related flyer and (2) the convenience/ground service related flyer.

Price is exhibited as the primary clustering variable in Grand Cluster A. Inasmuch as price tends to be heavily utilized by underinformed consumers to evaluate product or service quality, it is concluded that this cluster may describe basic life-style attributes of the infrequent or casual flyer.

Two variables commonly interrelated as evaluative criteria are food service and beverage service. Grand Cluster A exhibits these variables as being closely interrelated with each other as well as being interrelated with stewardess service and advertising consciousness. Collectively, these four variables provide criteria that may tend to support casual flyer perceptions of an air carrier. That is, the infrequent flyer may tend to evaluate the perceived quality of air carrier services by food and beverage services as supported through inflight stewardess services. These three criteria may well support service related information acquired through secondary (i.e., promotional) sources.

Although pilot involvement and reservation services are weaker components of Grand Cluster A, it is concluded that because both of these variables are descriptive of travel arrangement and inflight support services, the casual flyer may utilize these criteria as a means of carrier service evaluation. Inasmuch as infrequent flyers tend to arrange personal flight plans via carrier reservation services, reservation service related attributes (e.g., telephone waiting time, telephone personnel, ticket mail services, credit card acceptance, etc.) provide worthwhile inputs to carrier evaluation. Moreover, inflight pilot involvement with passengers through travel related information describing destination times, altitudes, weather, points of interest, etc., may provide evaluative inputs as an interpretation of general concern for passengers or hospitality of the air carrier.

Whereas the infrequent flyer may tend to utilize inflight service attributes as evaluative criteria, frequent flyers may tend to utilize goal related attributes to evaluate air carriers; that is, those attributes that support the realization of flight related goals become paramount in importance. Inasmuch as the frequent flyer tends to be a business passenger with business related goals, service attributes that relate to convenience, speed of service, and regularity of service tend to become primary attributes in carrier selection. Figure I represents schedule, promptness, baggage handling, comfort, terminal, and travel agent services consciousness as central elements of Grand Cluster B. Common among frequent flyers is the selection of an air carrier because of schedule availability. Moreover, convenience for this passenger may be described in terms of promptness and baggage handling as these relate to and interact with carrier scheduling.

Comfort, terminal services, and travel agent services provide additional evaluative criteria for frequent flyers. Whereas the infrequent flyer may have too few experiences to discriminate among several carriers, the frequent flyer's exposure to several carriers with somewhat regular occurrences may support his establishing preferences for carriers relating to comfort and terminal services. Finally, he may tend

to rely upon travel agent services to maximize the convenience or minimize the displeasure of arranging personal flight plans.

FIGURE I  
HIERARCHIAL CLUSTERING OF LIFE-STYLE COVARIATES OF AIR PASSENGERS (n = 99)

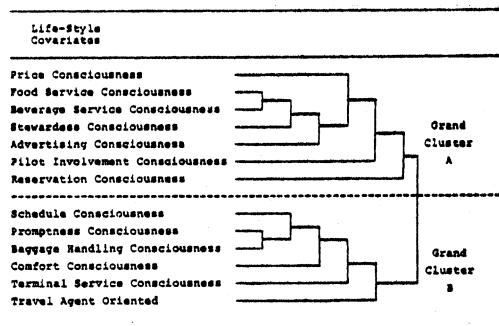
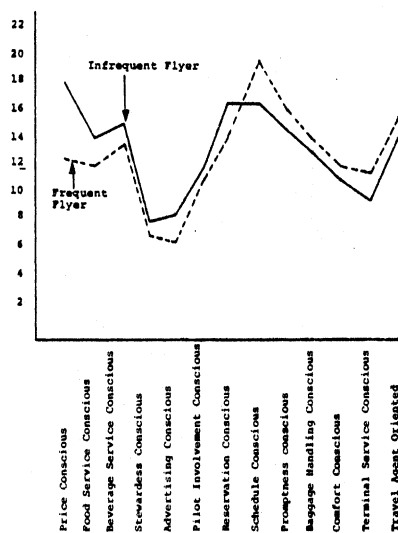


Figure II exhibits average responses on the thirteen life-style covariates of frequent and infrequent flyers. Graphic explication seemingly supports the proposition that infrequent flyers tend to be more inflight service conscious and frequent flyers tend to be more convenience or speed of service conscious.

FIGURE II  
AVERAGE RESPONSE OF FREQUENT AND INFREQUENT FLYERS ON LIFE-STYLE COVARIATES



### Conclusions

Subdividing markets into somewhat homogeneous sub-markets is a strategy useful to consumer service related industries. The airline industry, as a result of the Deregulation Act of 1978, will likely attempt to refine its merchandising methods while individual corporate competitors will likely attempt to redefine their markets and marketing policy.

Two major air travel markets may be described as a result of frequency utilization of industry/carrier related services; that is, (1) frequent flyers and (2) infrequent flyers. Although it may be difficult to provide a very specific description of either market in demographic terms, a description is possible via differences in life-style orientations.



The results herein reported utilized hierarchial clustering to identify life-style covariates of infrequent and frequent flyers. The following descriptions are suggested by the results:

(1) Infrequent flyers: This consumer type tends to be inflight service conscious. He tends to utilize those services that may impact upon the relative enjoyment of his air travel related behavior to evaluate carriers. He may tend to utilize inflight service attributes as a confirmation of information derived from secondary, non-personal sources. Furthermore, an evaluation of hospitality or general concern for passengers may result from stewardess services and pilot related involvement.

(2) Frequent flyers: This consumer type tends to utilize convenience/speed of service related attributes in his evaluation and selection of an air carrier. Scheduling is predominant in his store of values as a selection criterion. Also, promptness and baggage handling services tend to be utilized in air carrier selection confirmation. Inasmuch as this consumer type likely has many competitive experiences, he will likely develop preferences that include comfort and terminal services as criteria. Finally, the frequent flyer will likely utilize travel agency services to facilitate air travel planning.

The results of this study are descriptive and should not be interpreted as conclusive. However, it is concluded that life-style profiling of airline travelers will likely provide for efficiency and effectiveness in the establishment of policy related issues on market definition and marketing strategies of industry competitors.

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## WOMEN COMPRISE UNLIMITED SALES TALENT POOL BUT NEED SPECIAL LEADERSHIP

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### Abstract

One can construct a strong hypothesis that women can be highly successful as industrial sales representatives provided that they are placed in an environment which contains management that is aware of the potential of this pool of labor, sensitive to special problems that are encountered in placing women in industrial sales jobs, and determined to provide an adequate and proper situation in which the woman has at least a fair and honest chance of succeeding. The content of this paper therefore, shall be organized to argue in favor of this hypothesis. This position shall be justified by referring to four kinds of information: trends in the employment of women in organizations, especially as industrial sales representatives; applied case histories and primary research discoveries; environmental and interpersonal barriers impeding the success of women in organizations; finally, applications by management which can enhance the success accomplishment of the worker.

### Current Trends

All available evidence, (Reha, 1979; Schien, 1978; Slater, 1978) and it is plentiful, illuminates and confirms the fact that political events, legal judgments, and social evolution in general have made it inevitable that women will pursue and be accepted into leadership roles in organizations and more especially into management. Pressures (Business Week, 1978; OECD Observer, 1979) which already are substantial and have widespread sources including various social groups, associations, municipal and federal government, and education, to employ large numbers of women and to establish goals and fulfill quotas of this so called minority group will continue and are likely to acquire additional social and financial support. The Milwaukee based consulting firm of Barnhill-Hayes, Inc., reported in Industry Week the results of 300 business leaders' opinions about the future of women in management, and while this group felt positive regarding women's chances of breaking into senior management, the single most important finding in the study was there is a crucial lack of candidates, (Industry Week, 1979). There are many individual indications however, that this trend is changing, beginning at the heart of the labor force where more and more women are entering with a career orientation, and the double income household is common place. Slater (1978) and Reha (1979) studied trends in the labor force and in business school preparation of women studying management and reported some enlightening discoveries. Between 1966 and 1975, Slater reported, over 6 million workers entered the labor force and that over half of these were women, and two-thirds of the increase in female employment was in white collar jobs. Of all professional and technical jobs, women held 43 percent in 1977 although a very large proportion of these were employed as bank officers or financial managers, restaurant managers, and sales department heads. Most of the gains in administration were located in schools, mainly elementary and secondary. Sizable gains by women were made as real estate agents and brokers and as sales representatives at the wholesale level.

Women (Biles, 1978) account for 51 percent of the population of the United States, 40 percent of the workforce is women, and there are about 40 million women at work in the United States at the current time. Only about 6 percent of these however, occupy management or administrative jobs and three fourths are concentrated in the traditional "female professions" of secretary-stenographer, household worker, bookkeeper, elementary school teacher, and waitress. The needs for workers in many of these jobs is growing weaker, thus forcing women to seek other occupational types of careers. Coresponding to a falling birth rate, demand for elementary school teachers has regressed and stabilized. Advancing technology is also affecting the demand for women in clerical types of work. Read (1979) reported that 1 1/2 million clerical jobs could disappear during this decade as a result of word processors, new communicating systems, desk top computers, and facimile machines. The banking and insurance industries may also be affected significantly by office automation where the current 600,000 women workers could be reduced by the eradication of 180,000 jobs in ten years. The retail trade and manufacturing sector will also feel the effect of automation in typical women's jobs. Computerized check-out systems and automatic price scanning methods are estimated to take away 300,000 jobs by 1990, and the number of this type of job in manufacturing fell from about 3 million in 1971 to 2.1 million in 1978, and this trend is expected to strengthen.

Reha (1979) disclosed that 42 percent of all people in college is women, that the number of women enrolling in colleges and universities is increasing faster than that of men, and that in the number of traditional college age students, 18 to 21, enrollment figures were about equal for men and women for the first time in 1977. The popularity with women of the Master of Business Administration program is on the rise too: the percentage of female MBA students doubled from 7 to 15 percent during the period of 1972 to 1975 and during the 1976-1977 school year, 21 percent of MBA students were women.

Reha also surveyed deans and administrators of schools of commerce and business administration in Canada and the United States to find out how the curricula, programs, and courses were being changed and developed to serve the continuing influx of women into formal higher education. Deans' and administrators' responses varied regarding the need for special treatment of this group. Some said women encounter different problems than men do in the business world and therefore schools should have women in management courses; others said that this group needs special attention and accommodations but that the need can be met by integrating subject matter into existing courses, and a final opinion was that no special considerations were necessary because men and women need the same training to compete equally in the business world. These respondents revealed the fact that fifty percent either offer or plan to offer specific courses or programs dealing exclusively or partially with the unique needs of problems of women in management.

## Proven Effectiveness

The most inspiring reason that management has when considering the employment of women as sales representatives is the fact that many recognized companies have clearly established that this labor resource can be put to work with substantial assurance that performance will be competitive and satisfactory. These companies have substantiated the fundamental facts that women possess the appropriate aptitudes, attitudes, and intellectual and physical resources required for significant accomplishment as industrial sales representatives.

Computer Sciences Corporation of El Segundo, California, had a total of four women marketing and customer services representatives in 1973. Five years later, however, one of its sales divisions employed 50 women on a 200 person staff. The Xerox Company hired over 1,200 people for sales jobs in 1977 and 419 of them, 31 percent, were women. International Business Machines has doubled its female sales force since 1974. The percentage of women selling life insurance increased from 2 percent of all life insurance sales people in 1971 to 12 percent in 1978. The Aluminum Company of America has a 190 person sales force and 10 percent are women. A recent study of the chemical and printing industries showed that 14 companies employed 36 saleswomen in 1972. In the same industries, 43 companies employed 402 female industrial representatives six years later, an increase of over 1,100 percent (Carter, 1980). D. D. Miller, Board Chairman of Rumrill-Hoyt, Inc., of Rochester, New York, believes that women are often inherently better sales representatives than men. Speaking at a meeting of the American Business Press, he said, "Women are often better prepared, far more organized, and do far better follow-up jobs, and think a lot faster on their feet than do their male counterparts. To women representatives, a sales call is an opportunity, not a duty." Miller continued to praise the talent of the female in the selling job. "They come in with ideas, not just numbers and comparisons. They want to talk first about the client and his marketing opportunities and how their publication fits in, rather than simply talking about the publication itself and letting you make the transition for yourself" (Carter, 1980). A Los Angeles personnel recruiter claims women to be "better organized and more emphatic than men are" (Wall Street Journal, 1978). There is also laboratory evidence that women are equal to men in this job. In a survey of 3,000 members of the Sales Executive Club of New York, responding sales managers said they found that women tend to follow through on projects better than men, exhibit a better attitude, and are superior to men in reliability and creativity (Howard, 1978). Robinson and Hackett found no significant differences in the competency of saleswomen and salesmen in their research as reported in *Sales and Marketing Management* (1977). Perhaps Christine Strittmatter, once a sales representative for Wang Laboratories in the Washington-Baltimore-Philadelphia area and now the manager of the three metro markets with a staff of 21 people, including 7 male and 3 female sales representatives and a quota of 2 million plus dollars, sums it up best. She says, "I've had men salesmen and women salesmen working for me... you're dealing with individuals and some can sell and some can't" (Howard, 1978).

## Role Modeling and Sex Stereotyping: Powerful Barriers to Success

Shapiro, Haseltine, and Rowe (1978) studied the influence of role models and mentors or coaches in professional schools and propose that role modeling offers no panacea and may indeed be counterproductive while the concept of mentors is clearly a variable in success. Women often assume that the female role model is a cornerstone variable in the successful resolution of professional identity and feminine self concept for the female professional in male dominated professions. Research findings, however, depict the actual situation more clearly and show that partial role modeling is the more accurate assessment of the act. Indeed, these researchers reason that the search for the ideal role model, one that uniquely embodies the attributes, achievements, and characteristics that the young female professional wishes for herself is hopeless, filled with unattainable expectations and void of gratifications for ambitions. Role models are insufficient for gaining leadership, authority, and power within the organization.

Shapiro, Haseltine, and Rowe (1978) propose that the concept of the mentor is definitely a crucial factor in the upward progress and mobility of the young professional woman, especially at the sensitive "screening" or "filter" points in the progression pathway where the perception of and trust in the woman's competence and compatibility are the acute elements of her evaluation. Further research is needed to clarify the process by which mentors are identified and selected. It appears that the process is not democratic and is apparently directly related to gender, social class, and race. Additional investigation into the concept of mentors and mentorship may be productive in refining the procedures directed at bringing women into positions of middle and upper management.

Sex role stereotyping is one of the largest blockades standing in the way of women's success attainment, and the evidence surfaces in the forms of perceived values of women, job placement, and interpersonal relations, including supervision, all of which contribute heavily to stalling a woman's progress. Schien (1978) noted that successful managers and men in general were perceived to possess characteristics of leadership ability, competitiveness, self-confidence, objectivity, aggressiveness, forcefulness, being ambitious and desirous of responsibility whereas women were perceived not to have these characteristics. This study determined that both male and female subjects believed that to "think management" meant and required one to "think male." Wells (1979) and Schien (1978) have carefully documented the effect in job placement and job assignments of the sex stereotyping of women. Women are likely to be placed in staff type jobs because they are viewed as more humanitarian, helpful, and sincere to others. In and of itself, this process seems perfectly reasonable and harmless. But this is only on the surface. With closer investigation, one recognizes that these kinds of jobs are dead end jobs and not only do they fail to provide upward mobility paths, they require skills which are generally repetitive and exclude the privilege of acquiring the necessary upgrading skills if the woman is to move into higher levels of responsibility.

Certain data suggest that evidence of this cultural bias surfaces in time taken in average non-working activities in an eight hour shift and in rates of hourly pay, especially when the pay rate is adjusted for non-working activities. Wells (1979) reported that men spent an average of 11 percent or 52 minutes of each paid work day in non-work activities. A \$7.00 an hour wage became \$8.48 when adjusted for non-work activity time. Women however, due to the nature of their jobs, which allows closer supervision, spent 8 percent or 35 minutes of the regular 8 hour work day in non-work activities. Adjusted wages for the female were \$4.86 based on a \$4.30 an hour wage base. This study suggests that women expend 113 percent more effort than men during the time each is involved in work activities.

Surprisingly to some managers who feel that setting quotas is the proper way to introduce women into their work forces, quota management breeds tokenism which is usually a path to a certain fatal future in the use of women in professional jobs, and is unquestionably true when applied to sales representative types of jobs. One may assume, as has the author, that the originators of the idea of staffing by quota, who are of course bureaucrats with a high probability of little hands on knowledge of this kind of highly specialized work, intended only progressive and positive results with the creation of the quota. As usual, however, the more government gets involved in free enterprise, the worse the firm seems to run. The boomerang effect is felt no more precisely by anyone than the woman who is placed in the token position in order for management to fill quota requirements. This is the case when a woman is put into a job because of and due to her sex rather than because she has qualifications and potential to fulfill the requirements of the job. This form of worker placement may be the ultimate and most detrimental form of worker placement discrimination because a person placed in a job based upon such methodology faces a certain failure. Management that practices, condones, or allows the procedure of tokenism to be used seems to believe at the outset that the woman is basically inferior, is less innately talented, and possesses fewer skills and abilities than does her male counterpart. This attitude engenders tokenism placement which further compounds the aggravation and complexity of helping women to succeed in what are historically male dominated jobs. The results of tokenism seem to be prophetic. The women are placed and trained and groomed as if they are unqualified therefore assuring that they will fail or at best accomplish mediocrity which subsequently reinforces the original attitude of management that they lacked depth of talent and adequate aptitude from the beginning.

This problem is made more perplexing by the well known social phenomenon of exclusion from the group when one is incapable of penetrating group resistance and therefore becoming "one of the boys." Yet it is essential that a person be allowed to take part in and be a part of the network of interpersonal relations and communications that exists informally in all organizations if that person is to fully understand and grasp the subtleties and nuances of meanings and behaviors that play powerfully upon one's ability to understand political relationships and acquire power potential within the organization. Without the entrance potential into the gang and without one's being embraced by the members of it, women are denied the opportunity to form political alliances, negotiate and trade for favors, and to casually influence others through these invisible networks.

Rosen, Benson, and Jardee (1979) pinpointed three distinct administrative biases toward women that are consequences of sex stereotyping. Administrators expect top priority to be given to career by male employees when there is a conflict between career and family but expect the opposite attitude of women; when personal conduct threatens one's job, administrators make stronger efforts to retain valuable male employees than they do the equally qualified female employee, and administrators favor males in promotion and career development decisions. Wells (1979) reports that women are encouraged to change personalities to fit the organization, to become more assertive and independent and yet when they do so, they are considered pushy whereas a man with these same characteristics is often thought of as possessing executive potential. Wells further claims that "...men are afraid of women with drive and lack respect for those without it."

Burrow discovered as reported in Biles and Pyratel (1978) that women meet with distinct resistance in trying to obtain the experience and skills that are needed for one to become a generalist in management. Biles and Pyratel extended the Burrow study and detected that male managers held a basic assumption, that is that women had no interest in certain phases in business, and whether due to causal effect or not, therefore, excluded them from the tight-knit social systems of upper management where business is practically always discussed and deals are frequently made. Biles and Pyratel concluded that only rarely does a male executive groom and guide a female to overcome the hurdle of assistant level management and jump into the upper level management stream of mobility.

#### Conclusion

Evidence is adequate to conclude that women have the aptitude, attitude, and intellectual and physical resources required to be successful in the job of industrial sales representative. The sheer number of women available for such jobs will continue escalating for several documented reasons, and this larger number will be more professionally oriented and acclimated and more highly trained academically. All cultural, social, and psychological trends substantiate the fact that these tendencies are not restricted to simple short term phenomenon status but are indeed deeply entrenched in the fiber of society and will continue maturing as a mighty and powerful occupant and influence in the world of work.

Women are available and willing to become successful sales representatives on a broad industrial front; indeed, their march toward success has already begun and it behooves aggressive and alert managements to employ, indoctrinate, train, and lead this newly emerging resource to success in this occupation. The major barriers to the effective application of women to industrial sales jobs must be identified, dismantled, and removed. They are socio-cultural in nature and are often so subtle as to go unrecognized by managers and managements who remain steeled in tradition and maintain inaccurate and distorted perceptions and beliefs.

One must initially overcome the propensity to keep women in her historical "female role" thereby opening the doors of opportunity. Having made this decision, the environmental structure (including policy and procedural adjustments), must be so built to accommodate the

new woman sales representative and facilitate her success in the job. This talent will prove to be a more highly prized resource in the future for those who are willing to break the ground of developing it and move along the learning curve ahead of competition.

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## ASSESSING CONSUMER PREFERENCES FOR LIVE MUSIC

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### Abstract

An exploratory study sought to measure preferences for live music performances to aid management of a performing arts auditorium at a large university in the effort to reverse a downward trend in student attendance. Data were collected from a sample of the target market segment and factor analysis revealed interpretable patterns of preferences both for types of music and performers.

### Introduction

Managers of "arts delivery systems" must develop marketing strategies and programs to attract consumers (audiences) in much the same way as managers of more conventional products. Although the necessity for marketing is widely accepted by arts managers, they often use it in quite limited ways. They have traditionally developed marketing strategies more "by the seat of their pants" than through systematic procedures of marketing research and planning. Therefore, there has been relatively little application of consumer behavior theories and research results to the consumption of aesthetic goods. Intuition and experience help guide any manager, but many arts managers feel that the kinds of "artistic" decisions they must make preclude the formulation and application of scientific theories. Such beliefs undoubtedly explain in part why this area of marketing has not received a great deal of attention in the marketing literature.

Past research on arts marketing has been somewhat eclectic and primarily descriptive in nature (Krall-Nagy and Garrison, 1972; Nielsen and McQueen, 1975; Ryans and Weinberg, 1978; Weinberg and Shachmut, 1978). A set of papers presented at the 1979 Conference of the Association for Consumer Research (Belk and Andreasen, 1980; Huber and Holbrook, 1980; Semenik and Young, 1980; Sexton and Britney, 1980) may reflect an increase in interest by marketing researchers in marketing the arts, but as suggested by the discussant for the session (Kassarjian, 1980), arts people still have not been sold on the value of marketing and consumer behavior research. Nevertheless, it seems likely that if more studies focusing on consumer behavior with respect to aesthetics goods in general or particular art forms are conducted, arts managers will recognize the relevance and applicability of consumer behavior theories and research methods. This paper seeks to make a small contribution toward this end.

The impetus for this exploratory study was a directive to the manager of a university performing arts auditorium to reverse the secular decline in attendance. Of special concern to this manager is student attendance, since the proportion of students in the audience has declined more precipitously than that of other patrons. The auditorium management has always been somewhat constrained in its choice of musical performances because rock concerts have been in the domain of another campus organization. Thus, other possible reasons must be sought to explain why student attendance has declined for auditorium events which, on the surface at least, do not appear to have dramatically changed in character over the years. While concurrent research is underway to attempt to isolate reasons for unsatisfactory levels

of patronage, this study is directed towards the issue of identifying the types of music performances that would appeal to the student population.

Certainly many factors can contribute to low attendance at a performing arts center. But in that the selection of performing arts events (hereafter referred to as "programming") is a major element of the marketing strategy, it is imperative that the preferences of target audiences be assessed in order to develop more attractive programming for various segments of the market. This study takes the first step towards determining the kind(s) of programming that would appeal to students. Specifically, preferences for live music performances are investigated to determine (1) how they align with music categories and (2) whether they display some underlying structural characteristics.

### Research Design

Since this study relates to the matter of programming, it was important to confirm that programming is a major determinant of attendance at the university auditorium. To that end, a pilot study was conducted. A brief self-administered questionnaire was used to obtain rankings of reasons for the student respondent not attending, or only occasionally attending, events in the auditorium. Sixty-three students enrolled in courses in the School of Business comprised a convenience sample, the composition of which corresponded to the large sample used for the preference study. The results (Table I) suggested that programming is an important reason for low attendance among this sample, which supports the rationale for the present study.

To gain insight into preferences for live music, a self-administered questionnaire was given to a convenience sample of approximately 120 students who were taking courses in the School of Business. One hundred thirteen questionnaires were usable, 93 from undergraduate and 20 from graduate students, most of whom were enrolled in the School of Business. This sample, albeit disproportionately composed of business students, came from the population of interest, i.e., all students enrolled in the university, and is believed to be sufficiently representative of the manager's target population to provide useful insights into all students' preferences and attendance behavior.

The questionnaire contained three major sections dealing with degree of liking for different aspects of live music. A 7-point Likert-type response format was employed, and interval scales were assumed. One section itemized 29 different categories of music for which the respondent indicated a degree of liking. The second section contained 17 descriptions of performance characteristics (fast versus slow music, male versus female performers, etc.) to which the respondent indicated the degree to which he/she agreed with the statement. In the third section 17 names of artists were listed, and the respondent was instructed to indicate how much he/she liked a particular artist or group. Questionnaire items were designed from information obtained in pre-survey focus interviews with students, from *Billboard*, Arbitron ratings, and expert opinion. Minor changes in item wording were made after a limited pretest of the survey instrument. Eight items pertaining to attendance



at the auditorium and several questions requesting demographic information were also included.

Principal factor analysis was used to analyze the data in order to ascertain how live music preferences might be related and what performance dimensions might summarize the preference ratings. While factor analysis is often used for products, the attributes of which are prespecified, the preliminary interviews suggested that attributes, or characteristics, of music most preferred were not easily articulated. As a result, the items in the second section characterizing musical performances were included to ascertain (1) whether respondents could indicate preferences for performance characteristics and (2) if these characteristics seem aligned with specific types of music.

### Findings

Each of the three sets of data was factor analyzed, and the resultant factor loadings obtained through VARIMAX rotation are presented in Exhibits I, II, and III. In the analysis of the first section containing 29 categories of music, the first five factors, accounting for a total of 86.2% of the variance, were interpretable (Exhibit I). The types of music loading on these factors formed major categorical clusters, which was expected. Country music was clearly indicated by factor 1. Factor 2 represented what has traditionally been considered "black" music: rhythm and blues, soul, jazz, and blues. Factor 3 represented hard rock, and factor 5 combined various types of popular, or adult contemporary, music: top 40, pop, soft rock, and contemporary. Factor 4 was somewhat more difficult to interpret, apparently reflecting more traditional kinds of music -- classical and folk.

In comparing the clusters of music types and mean preference ratings (Table II), 2 factors -- labeled hard rock and traditional -- seemed to represent less popular music forms. That is, the mean of the mean values for the highest factor loadings in each of the 2 clusters fell below the overall mean for section 1; the mean of the "traditional" cluster, for example was 2.43, where the overall mean was 2.91 and a "3" represented the midpoint of the scale. In contrast, the "popular", or adult contemporary, cluster had a mean of 3.98, representing the most preferred category of music. The "black" music cluster ranked second in preferential ordering, country music was third, followed by hard rock and traditional, respectively.

The results of the factor analysis of the 17 performance dimensions were largely uninterpretable (Exhibit II). The first two rotated factors captured 66.2% of the variance, but the item loadings did not suggest that students, in this sample at least, tended to associate performance characteristics with each other. Examination of the correlation matrix revealed low inter-item correlations, and this fact alone would explain why a factor analysis of section 2 would not produce especially meaningful results. A close examination of the frequency distributions for the items did reveal, however, that while there was a strong middle-position or "no opinion" bias, certain performance dimensions displayed skewedness. That is, students appeared to prefer "nice, mellow" music and music with "a definite beat." Respondents also tended to indicate that instrumental and "soft" music appealed to them and that age and popularity of the performer(s) were relatively unimportant considerations. The tentative conclusion is that students could to some degree characterize their musical preferences but that the design of the questions in this particular section and/or the use of factor analysis may have been inappropriate. There is some reason to believe that respondents were frustrated in

responding to these preferential statements, given comments made after the questionnaire was administered. That is, subjects had little difficulty -- indeed they enjoyed -- registering preferences for the items in section 1 (music categories) and section 3 (artists), yet they felt the statements in section 2 were "difficult." These comments tend to suggest that students, who in this sample represented the "lay" population, do not typically think in terms of the performance dimensions, or attributes, of live music.

The analysis of the third section containing names of artists or groups revealed categorical groupings, for the most part (Exhibit III). All rotated factors could be interpreted, or wit: mellow (or "adult") contemporary music, instrumentalists, big names, new-wave rock, and upbeat contemporary music. In examining mean preferences, there appeared to be weak preferences for those new-wave rock artists and stronger preferences for those artists in the upbeat contemporary category.

Sections 1 and 3 -- music types and artists, respectively -- were combined in a factor analysis. Artists tended to be clustered with the types of music with which they are associated (according to Billboard and expert opinion). This corroboration suggested response consistency. The mean preference ratings appear to have face validity when compared with the biggest drawing acts in live concerts, as listed weekly in Billboard.

While no formal analysis was conducted on the attendance and demographic data, the mean responses for the eight attendance items suggested that students would go to a performance "if the Auditorium offered something I liked" (mean response across subjects was 5.6 on a scale in which "6" indicated strong agreement). This result strengthens the contention that measuring programming preferences is vital to increasing student attendance.

### Discussion

The validity of these findings is supported to some extent by the results of a previous study in which three performing arts program types emerged from a factor analysis: modern music and dance, classical music and dance, and theater (Nielsen and McQueen, 1975). The previous study revealed that older people prefer more classical music (and dance) than younger people do, and in the present study students appeared to register a stronger preference for contemporary music. In addition, it was previously found that leisure time was strongly related to attendance at modern music and dance events, which appears to roughly correspond to the "schedule conflict" rationale for not attending events indicated in the preliminary study.

The findings suggest that performance dimensions may not be especially meaningful in the collection of preference data, i.e., structural preferences are difficult to measure. Consumers are probably more likely to react holistically to music than to its individual components -- that is, the configuration is most important, and evaluation using specific attributes or performance dimensions may not take place. Certainly it would appear that direct questions regarding performance dimensions are not likely to elicit meaningful responses from the general population, at least. (Musicians, in contrast, may be able to technically describe the types of music that appeal to them.) But this tentative hypothesis must be further tested. That is, rather than preferential statements like the ones employed in this study, perhaps a semantic differential scale might elicit more definitive responses.

Perhaps the rather sparse research in aesthetic goods marketing is due to the consumers' attitudes and

preferences being far more affective than cognitive, making research more difficult and theory formulation more elusive. Indeed, when asked why they liked a particular type of music or artist in the focus interviews, students would often respond that they simply "liked the sound."

#### Conclusion

The small convenience sample in this study does not allow projection of the findings onto the entire student population. However, similar results from a larger and more representative sample could be quite useful to the auditorium management. Clearly, if lack of awareness of the events is the primary reason for unsatisfactory attendance among students, the management can take action to overcome this problem. However, the high ranking of "Dates of performances don't fit my schedule" presents a more perplexing problem. Given this result and free-response information gathered in the pre-survey focus interviews, it would appear that students perceive that their discretionary time is quite limited. To some extent, heavier scheduling of events on weekends may alleviate this conflict; however, it may be extremely difficult to substantially increase student attendance on a regular basis. Because students' preferences apparently are stronger for contemporary music, as opposed to the more traditional performing arts offerings, the manager may well be discouraged. Unless the organization's goals embrace offering more "commercial entertainment," significantly increasing attendance may not be possible.

This research represents a step towards measuring preferences for live music. Further, it illustrates the applicability of marketing research concepts and techniques to the performing arts. In the search for theory of consumer behavior in this area, preference measurement provides a beginning, and this study provides some information as to how such data might be collected and analyzed. Because part of the research pertained specifically to one auditorium, generalizability of the findings is questionable. However, the methodology used here appears to offer promise of a means to provide useful data to arts managers.

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TABLE 1  
REASONS FOR NOT ATTENDING AUDITORIUM EVENTS

Importance Rankings<sup>1</sup>

	Freq		Rank		Freq		Rank		-Overall-	
									Freq	Rank
Ticket prices are too high.	9	4	10	3	12	2	31	2	1/2	
Parking is a problem.	2		3		3		8			
The kinds of performances don't suit my tastes.	10	3	11	2	9	3	30	4		
The acoustics are bad.	2		2		1		5			
None of my friends go there.	1		5		2		8			
It's hard to get good seats.	4	5	6	5	9	3	19	5		
The Auditorium is like a mausoleum.	1		0		2		3			
It's a chore to buy tickets.	1		3		8	5	12			
Dates of performances don't fit my schedule.	16	2	13	1	13	1	42	1		
I don't know what performances take place there.	7	1	10	3	4		31	2	1/2	

<sup>1</sup>Total sample size was 63; of these, 54 indicated they had attended an event in the Auditorium at some time, and 33 had attended in the past eight months. Items in survey pertained to events requiring paid admission.

TABLE II

PREFERENCE RATINGS<sup>1</sup>

Section 1 -- Overall Mean = 2.91			Section 2 -- Overall Mean = 2.79			Section 3 -- Overall Mean = 3.22		
Variable	Mean	Std. Dev.	Variable	Mean	Std. Dev.	Variable	Mean	Std. Dev.
rock & roll	4.4956	1.3766	beat	3.8938	1.2703	Fogelberg	4.8850	1.4805
soft rock	4.4248	1.3350	mellow	3.3982	1.3728	Ronstadt	4.5221	1.3764
jazz	4.1239	1.5185	fast	3.3186	1.2905	Daniels Band	3.9292	1.6076
top 40	3.9646	1.4512	group	3.0619	1.5657	Starship	3.6991	1.5462
contemporary	3.8053	1.4630	familiar	3.0531	1.4445	Rogers	3.6814	1.5542
pop	3.7168	1.2282	singer	3.0000	1.5059	Severinsen	3.4348	1.4256
R & B	3.6814	1.3314	contemporary	2.9735	1.3327	Manilow	3.1681	1.8318
country rock	3.6726	1.6607	acoustic	2.9646	1.4388	Pink Floyd	3.1681	2.0870
blues	3.6637	1.4615	entertaining	2.7611	1.4837	Blondie	3.1593	1.7757
easy listening	3.6372	1.5298	singing	2.5841	1.4622	Hayes	3.1593	1.6721
oldies	3.5844	1.5648	male	2.5398	1.5121	Murray	3.1150	1.5797
bluegrass	3.4071	1.7094	female	2.5221	1.2963	Basie	3.0885	1.6827
modern country	3.1150	1.6078	own age	2.4602	1.5297	Phil. Orch.	2.9381	1.7692
classical	3.0531	1.7871	younger	2.4159	1.2373	Sills	2.4071	1.6831
hard rock	2.9469	1.7517	loud	2.2301	1.4639	Captain &	2.3628	1.5472
soul	2.9292	1.5043	big name	2.2035	1.5420	Sha Na Na	2.0796	1.6644
mellow country	2.8319	1.7003				Cash	1.9115	1.5899
American folk	2.7434	1.4927						
hot country	2.6372	1.8711						
disco	2.3894	1.9659						
ethnic folk	2.2389	1.5485						
country stds.	1.9204	1.3637						
choral	1.8938	1.4538						
acid rock	1.8564	1.6949						
Latin	1.6903	1.5473						
punk rock	1.5929	1.6989						
operatic	1.5664	1.5577						
gospel	1.5044	1.5762						
religious	1.3009	1.4008						

sample comprised 113 subjects; responses were recorded on a 7-point scale on which a "6" represented the highest preference (or agreement).

## EXHIBIT I

## VARIMAX ROTATED FACTOR MATRIX: SECTION 1 - MUSIC CATEGORIES

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
1-classical	-.04020	.13252	-.08197	.56441	.06402
2-disco	-.17993	-.06252	-.19476	-.12523	-.06322
3-ethnic folk	.11587	.23174	-.04797	.53969	-.17734
4-R & B	.21626	.86017	-.00210	.08243	-.00726
5-soul	-.11106	.53136	.03446	.14316	.07510
6-hot country	.71251	.11129	.13417	.03616	.01109
7-American folk	.44903	.02810	.02417	.56985	-.20329
8-jazz	-.02251	.64745	.00855	.04819	-.06463
9-oldies	.21174	.31414	-.07016	.26899	.13461
10-punk rock	-.03679	.10766	.50622	.13773	.03792
11-blues	.21353	.79008	.14983	.17922	-.13238
12-mellow country	.78086	.02814	-.01397	.17271	.08016
13-operatic	-.04583	-.01838	.09415	.28848	-.09426
14-religious	.09435	.08906	.01609	.04438	.01777
15-gospel	.09234	.14017	-.05444	.20750	.07062
16-top 40	.04389	-.15694	-.02404	-.26009	.52736
17-bluegrass	.61218	.13272	.07793	.28628	.09012
18-modern country	.86245	.04809	-.03396	.01198	.14878
19-acid rock	.09982	.02532	.72621	-.03476	.07272
20-choral	.15291	.09625	-.07063	.08371	.09318
21-country stds.	.67788	.03906	.05989	.27095	.11003
22-hard rock	.06741	-.00899	.91137	-.10603	.12496
23-pop	.11633	-.05271	.25006	-.09182	.53570
24-soft rock	.19546	-.15162	.24229	-.15807	.51255
25-contemporary	.13719	.03823	.01588	.15599	.73334
26-Latin	.10410	.10695	.01195	.53669	.08869
27-country rock	.74238	.01681	.24023	-.19812	.16225
28-easy listening	.34999	.03872	-.15293	.00634	.14856
29-rock & roll	.24572	.04766	.50849	-.03969	.40598

## EXHIBIT II

## VARIMAX ROTATED FACTOR MATRIX: SECTION 2 - PERFORMANCE DIMENSIONS

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
30-fast	.28265	.59002	.23189	.10303	.00894	.02758
31-contemporary	.03100	.21137	.20164	.48806	-.12804	.12898
32-group	-.01968	.30326	.16754	.18225	.15661	.30160
33-acoustic	.08821	-.12329	.07838	.02976	-.01778	.77365
34-singing	.08813	.25249	.39966	.19935	.21063	.06376
35-own age	.31714	.03988	.41923	.41163	.22648	-.14177
36-loud	.27493	.64369	.17329	.31536	.04863	-.02635
37-old	.21003	.00574	.19724	.07898	.29133	.22179
38-male	.10245	.20740	.71863	-.05559	-.00392	.12967
39-entertaining	.05631	.05701	.10355	-.06990	.68357	-.03394
40-mellow	.01338	-.75176	.00756	-.01046	-.05317	.11903
41-younger	.55697	.27282	.16658	.42151	.06618	.01433
42-beat	.36704	-.07949	.31027	.20709	.18883	.16257
43-female	.34160	.23564	-.15105	.34888	.36293	.12673
44-familiar	.58323	.02900	.14174	.16972	.16323	.12163
45-singer	.22267	.03353	.66367	.26685	.10032	.06404
46-big name	.73410	.28156	.15496	-.17709	-.03046	-.02798

## EXHIBIT III

## VARIMAX ROTATED FACTOR MATRIX: SECTION 3 - ARTISTS

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
47-Severinsen	.22212	.42986	.09687	-.02379	.19589
48-Captain &	.66772	.16431	.14747	-.13926	-.08358
49-Rogers	.20319	-.03126	.56236	-.04650	.56241
50-Daniels Band	-.07644	-.11011	.36919	.11262	.60266
51-Sha Na Na	.29065	.26775	.39408	.14150	-.01774
52-Ronstadt	.14607	.04053	-.00826	.14282	.51762
53-Phil. Orch.	-.04847	.57993	.13588	-.15063	-.09350
54-Basie	.03662	.89832	.05507	.05792	.11365
55-Manilow	.82442	-.07091	.06990	-.17974	-.01171
56-Murray	.62602	.13093	.06060	.00514	.16203
57-Starship	.08806	-.24196	.05696	.49944	.39914
58-Sills	.16562	.36976	.42127	-.10982	.06990
59-Cash	.05540	.13723	.84670	.17092	.05564
60-Blondie	-.11330	.00448	.16629	.64866	.08118
61-Pink Floyd	-.29309	.01503	-.04701	.71850	.10172
62-Hayes	.17872	.45595	.00804	.35960	-.11324
63-Fogelberg	-.08533	.11320	-.03440	.01503	.49033

## DETERMINANTS OF RETAIL SALESPEOPLE'S ROLE CONFLICT AND AMBIGUITY

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### Abstract

Although previous research has found retail salespeople to be critical elements in the success or failure of a retail outlet, little published research has examined how to assist retail sales managers in developing a work environment that is conducive to productive salespeople. This paper explores the constructs of role conflict and ambiguity in retail sales and ascertains what some of the determinants of these two constructs are. The findings, which both agree and disagree with previous role research, suggest that retail sales managers can impact the levels of role conflict and ambiguity experienced by retail salespeople.

### Introduction

Retail salespeople have long been regarded as having positions that require little creativity, innovativeness, or sales effort. Prior research (Berry 1969; Jolson and Spath 1973), however, has found that retail salespeople do indeed play an important role in a retailer's customer-service mix. Despite retail salespeople's purported importance, little published research has been performed which suggests how retail sales managers can create a work environment that will be conducive for productive sales staffs. If salespeople are crucial to a retail store's success, research needs to be performed to determine how sales managers can assist retail salespeople in the performance of their jobs. This paper is directed towards that end.

Specifically, this paper explores the constructs of role ambiguity and role conflict to determine whether they are related to five antecedent variables of interest -- retail salespeople's satisfaction with performance feedback, job experience, level of education, age, and sex.

### Constructs of Role Conflict and Ambiguity

Role conflict occurs when a person experiences incompatible job demands or expectations from his or her role-set members. Role ambiguity occurs when an individual has inadequate knowledge or information about how to perform his or her job. Both of these constructs have been found to have detrimental behavioral and psychological effects on different types of organizational members (Greene and Organ 1973; Gross et al. 1958; Kahn et al. 1964; Rizzo et al. 1970). Much research interest has focused on the role conflict and ambiguity experienced by industrial salespeople and managerial personnel (e.g., Ford et al. 1976; House and Rizzo 1972; Kahn et al. 1964; Oliver and Brief 1977; Pruden 1969; Pruden and Reese 1972; Rogers and Molnar 1976; Schuler 1975; Szilagyi 1977; Walker et al. 1975). No published research, however, has explored the potential role conflict and ambiguity faced by retail salespeople -- the topic of interest here.

### Background Literature

#### Performance Feedback

Performance feedback in this study is the frequency with which an employee's supervisor communicates with the employee about his or her performance, as well as the employee's satisfaction with the supervisor's feedback. The results of past research regarding the relationship between performance feedback and role conflict have been mixed.

Walker et al. (1975) surveyed 479 salespeople and Brief and Aldag (1976) surveyed 152 nursing aides. Both studies found no relationship between performance feedback and role conflict. Rizzo et al. (1970) discovered that in their two-sample study, performance feedback was related to role conflict in one sample but not in the other sample. And Oliver and Brief's study of 114 retail sales managers (1977) ascertained that performance feedback was related to role conflict when using correlation analysis. The relationship attenuated, however, when role conflict was regressed over experience, performance feedback, and other antecedent variables.

Thus, based on previous research, the following hypothesis is posited:

Hypothesis 1: Performance feedback is unrelated to the level of role conflict experienced by retail salespeople.

Past research exploring the relationship between performance feedback and role ambiguity generally has found that performance feedback is inversely related to an individual's role ambiguity. Studies reaching this conclusion include Brief and Aldag (1976), Donnelly and Ivancevich (1975), Oliver and Brief (1977), Rizzo et al. (1970), and Teas et al. (1979). In fact, only one study was found (Walker et al. 1975) that did not reach this conclusion; rather, that study found the two variables to be unrelated.

Based on prior research, then, the following hypothesis is presented:

Hypothesis 2: The greater the level of performance feedback, the lower the level of role ambiguity experienced by retail salespeople.

#### Experience

In this study, experience refers to how long one has worked in retail sales, in his or her present position, and for his or her present employer/company. Past research suggests that, in general, experience is unrelated to role conflict. When using correlation analysis, both Walker et al. (1975) and Oliver and Brief (1977) found a negative association between experience and role conflict; when role conflict was regressed over experience and other antecedent variables, however, the relationship attenuated in both studies. And Rizzo et al. (1970), in their two-sample study, found experience to be unrelated to role conflict in one of the samples, but positively related to role

conflict in the other sample.

Prior research, then, suggests that the following hypothesis can be offered:

Hypothesis 3: Experience is unrelated to the level of role conflict experienced by retail salespeople.

There is no unanimity among past researchers regarding the relationship between experience and role ambiguity. Walker et al. (1975) hypothesized that the more experience a salesperson has, the lower the salesperson's level of role ambiguity; the results of their study confirmed the existence of this negative relationship. Oliver and Brief (1977), however, found no relationship between experience and the role ambiguity experienced by retail sales managers. After surveying 127 industrial salespeople, Teas (1980) also concluded that experience is unrelated to role ambiguity. And in one of their samples, Rizzo et al. (1970) discovered an inverse relationship between experience and role ambiguity; in the other sample, however, no relationship between these two variables was found.

Thus, previous research suggests that:

Hypothesis 4: Experience is unrelated to the level of role ambiguity experienced by retail salespeople.

Education, Age, and Sex

Little published research has examined the relationship between role conflict and ambiguity and employee demographic variables. In fact, only one study was found that explored the relationship between role conflict and ambiguity and level of education and age (Rizzo et al. 1970) -- two of the demographic variables of interest in this study. In addition, minimal research has focused on the relationship between role conflict and ambiguity and sex -- the other demographic variable of interest in the present study.

Rizzo et al. (1970) discovered that education was inversely related to role conflict in one sample, but was unrelated to role conflict in the other sample of their study. They also found that there was no statistically significant relationship between education and role ambiguity. Thus, the Rizzo et al. study (1970) suggests that the following hypothesis can be posited:

Hypothesis 5: Education is unrelated to the level of role conflict and ambiguity experienced by retail salespeople.

When examining the relationship between age and role conflict, Rizzo et al. (1970) concluded that the two variables were inversely related in one sample, but unrelated in the other sample. They also discovered that age was not associated with role ambiguity in either of their two samples.

Based on previous research, then, the following hypothesis is proffered:

Hypothesis 6: Age is unrelated to the level of role conflict and ambiguity experienced by retail salespeople.

Empirical research investigating the differences between male and female employees' experience with role conflict and ambiguity is sparse. Only one study could be found that examined the role conflict experienced by male and female employees. In a survey of 159

pharmaceutical salesmen and 93 pharmaceutical saleswomen, Futrell (1980) ascertained that saleswomen experienced greater levels of role conflict than salesmen. Based on this study, the following hypothesis is presented:

Hypothesis 7: Retail saleswomen experience greater levels of role conflict than retail salesmen.

Three prior studies were found that explored the differences in the role ambiguity experienced by male and female salespeople. Both Busch and Bush (1978) and Futrell (1980) discovered that industrial saleswomen experienced greater role ambiguity than industrial salesmen. And Swan et al. (1978) found that industrial saleswomen either were lower or higher in goal clarity (i.e., the degree to which the sales manager effectively made known to his or her salespeople their job expectations and evaluations) than industrial salesmen were.

Thus, based on the results of prior research, the following hypothesis is presented:

Hypothesis 8: Retail saleswomen experience greater levels of role ambiguity than retail salesmen.

## Methodology

### Sample

The sample consisted of 203 day-retail salespeople from seven retail outlets of a large department store chain. All seven stores are located in a large, mid-western, metropolitan area. The salespeople worked in high-service departments (i.e., provided much customer service). In addition, a variety of sales personnel from different departments are represented in the sample.

### Questionnaire

The questionnaire was personally administered by the researchers at each store. Role conflict was measured using items which were analogous to those developed by Ford et al. (1975), while role ambiguity was measured using questions which were similar to those developed by Donnelly and Ivancevich (1975) and Ford et al. (1975). The items, however, were modified to conform to a retail selling situation and were refined with the assistance of sales and marketing personnel from the retail chain.

To obtain a measure of role conflict, respondents were asked to indicate whether they believed their company, supervisors, and customers (i.e., their role partners) held an expectation of them on each of 24 job activity items. The respondents recorded their beliefs on a Likert-type scale where 5 = "strongly agree" and 1 = "strongly disagree." The amount of perceived conflict between the expectations of any two role partners was measured by calculating the absolute differences in the respondent's scale scores for the two role partners on each job activity. These absolute differences for all 24 job activities were then summed to arrive at the respondent's role conflict index. Role ambiguity was measured by asking respondents how certain they were about how their role partners wanted them to perform their jobs. The questionnaire presented respondents with a number of statements relevant for each role partner. Respondents indicated their degree of certainty on each statement using a Likert-type



scale, where 5 = "very certain" and 1 = "very uncertain." A total ambiguity score was then calculated by summing the respondent's answers to the 24 items related to role ambiguity.

Performance feedback was measured using four items focusing on how satisfied respondents were with the quality and frequency of their supervisors' communications about the salespeople's job activities and performance. Responses to these four questions were summed to arrive at a respondent's performance feedback index.

To obtain a measure of a respondent's experience, respondents were asked how long they had worked in their present positions, in a retail sales job, and for their present employer/company. The answers to these three questions were then summed to arrive at a respondent's experience index.

Scale reliabilities (coefficient alpha) were calculated to determine the internal consistency of the variables included in the role conflict, role ambiguity, feedback and experience indices. The respective reliability coefficients for these four indices were .71, .92, .64, and .88. Because the coefficients for the variables tested were quite large, the measurements appeared to be adequate for further analysis of the data. The appendix presents a sample of items used to compute these four indices.

### Results

The data were analyzed using bivariate correlational analysis which computes Pearson product-moment, zero-order correlations. (When analyzing the dichotomous variable sex, however, t-tests for differences between group means were used.) **Table 1** presents the variables of interest and their respective correlation coefficients.

TABLE 1

CORRELATIONS BETWEEN PERFORMANCE FEEDBACK, EXPERIENCE, EDUCATION, AND AGE AND ROLE CONFLICT AND AMBIGUITY<sup>a</sup>

Antecedent Variables	Role Construct	
	Role Conflict	Role Ambiguity
• Performance Feedback	-.18 <sup>c</sup>	-.35 <sup>c</sup>
• Experience	.08	-.29 <sup>c</sup>
• Education	.11	.14 <sup>b</sup>
• Age	-.04	-.17 <sup>c</sup>

<sup>a</sup>When analyzing the dichotomous variable sex, t-tests (and not correlational analysis) were performed. The results indicate that there is no statistically significant relationship between sex and role conflict and sex and role ambiguity ( $t = -1.16$  and  $0.46$ , respectively).

<sup>b</sup> $p < .05$

<sup>c</sup> $p < .01$

**Table 1** shows that five of eight correlation coefficients are statistically significant at the traditionally accepted levels. As was hypothesized, role conflict is unrelated to experience, education, and age. Two unexpected results are that role conflict is inversely but weakly related to performance feedback ( $r = -.18$ ) and unrelated to sex ( $t = -1.16$ ).

As was hypothesized, performance feedback is negatively related to role ambiguity ( $r = -.35$ ). The analysis, however, did not support the hypotheses that role ambiguity is unrelated to experience, education, and age. Rather, role ambiguity was found to be inversely related to experience ( $r = -.29$ ) and age ( $r = -.17$ ), while being positively but weakly associated with education ( $r = .14$ ). Furthermore, the analysis did not support the hypothesis that retail saleswomen experience greater role ambiguity than retail salesmen; instead, sex was found to be unrelated to role ambiguity ( $t = 0.46$ ).

### Discussion

The findings from this study both agree and disagree with the findings from previously published research concerned with antecedent variables related to role conflict and ambiguity. The present study -- although in a different setting from previous research (retail sales) -- found experience, education, and age to be unrelated to role conflict, while performance feedback was found to be negatively related to role ambiguity. These findings are generally consistent with prior role research.

The present study also shows that performance feedback is inversely related to retail salespeople's level of role conflict; experience and age are negatively associated with their level of role ambiguity; education is positively related to their level of role ambiguity; and sex is unrelated to their levels of role conflict and role ambiguity. These findings generally disagree with the findings from previous studies. Several possible explanations can be advanced for these conflicting findings.

First, performance feedback may be negatively associated with role conflict because the retail salespeople's role partners (their supervisor, company, and customers) may not explicitly state what their demands or expectations of the salespeople are nor do they try to accommodate the salespeople when conflicts arise. In the previous studies, however, the subjects' role partners may have managed the conflict better.

Second, experience may be inversely related to role ambiguity because of the high incidence of employee turnover and lack of formalized sales training in retail sales (Burstiner 1975). That is, because most retail salespeople receive little formalized sales training, they may be uncertain about how to perform their jobs when assuming their positions; frustrated by this uncertainty, some salespeople may elect to leave the company at the outset. Those who stay in their jobs, however, may learn how to perform their jobs over time and thus experience less role ambiguity. On the other hand, previous role research has traditionally examined personnel (e.g., industrial salespeople) who normally have some minimal level of formalized training before assuming their positions. This training may provide them with information concerning how they should perform their jobs and thus help to reduce their level of role ambiguity at the outset.

Third, education may be directly related to retail salespeople's role ambiguity because those with more education may receive less supervision and guidance from their supervisors than those with less education. Thinking that those with more education require less assistance than those having less education, the supervisors may spend more time with those having less education; as a result, the more educated salespeople may

be uncertain about how to perform their jobs which augments their role ambiguity. Furthermore, those having more education may assume their positions only temporarily; by not staying in their jobs very long, they do not learn over time how to perform their jobs. Thus, the more educated salespeople may experience higher levels of role ambiguity than those with less education, as those having less education may view their positions as being relatively permanent and opt to remain in their jobs over time, thereby reducing -- through job experience -- their level of role ambiguity.

Fourth, age may be negatively associated with role ambiguity largely as a function of one's experience. Retail sales jobs are frequently filled by older people -- especially women. Older salespeople may see their jobs as being relatively permanent; the longer they stay in their jobs, the more cognizant they become about how to perform their jobs. Younger people, seeing the job as being temporary, may leave the company before they have enough experience and job information with which to perform their jobs. Consequently, younger salespeople may experience greater role ambiguity than older salespeople do.

And fifth, unlike other studies, sex is unrelated to role conflict and role ambiguity. Possible reasons for this include the ease with which both male and female retail salespeople can interact -- fraternize -- which may help them learn how to perform their jobs; the availability of both male and female role models that retail salespeople can observe, which may help reduce their role ambiguity; and the equally effective communicating by salespeople's supervisors regarding how both retail salesmen and saleswomen are to perform their jobs.

### Conclusions and Implications

#### Role Conflict

The findings presented here suggest retail sales managers -- to some degree -- can affect the amount of role conflict experienced by retail salespeople. Improved performance feedback -- in terms of both quality and quantity -- should be sought in order to reduce role conflict. More specifically, the expectations of the salespeople's role partners should be identified and communicated to the salespeople. Where expectations conflict, attempts to reconcile the disparate expectations should be made. These practices can be done at the time a salesperson's performance is formally evaluated and on a continuous basis using departmental meetings or one-on-one informal meetings between the sales manager and the salesperson.

#### Role Ambiguity

The findings also suggest that retail sales managers -- to some extent -- can affect the level of role ambiguity experienced by retail salespeople. Specifically, managers should provide salespeople with information concerning how well they are performing their jobs and how they should be performing their jobs. Formal evaluations with each salesperson, one-on-one informal interviews with salespeople performing below their expected levels, and departmental meetings could be used to help salespeople reduce the role ambiguity they experience. The focus here, then, is to provide salespeople with more frequent and accurate information concerning their job performance.

In addition, it is critical that sales managers articulate to the younger, more educated, and less

experienced salespeople how they should perform their jobs. Training sessions, departmental meetings, verbal or written company policy communications, and periodic performance reviews specifically arranged for this set of salespeople could be used to help salespeople develop clearer perceptions about what is expected of them in the performance of their jobs.

### Appendix

Role Conflict Scale (24 items; 5 = "strongly agree" and 1 = "strongly disagree")

- My company expects me to give information to customers that will encourage them to buy the merchandise they are examining.
- My supervisor expects me to give information to customers that will encourage them to buy the merchandise they are examining.
- My customers expect me to give information to them that will encourage them to buy the merchandise they are examining.

Role Ambiguity Scale (24 items; 5 = "very certain" and 1 = "very uncertain")

- I know my company expects more from me than just selling.
- I know the policies and various rules, procedures, and regulations of my company which affect my job.
- I know what my supervisor wants me to do in my job.

Feedback Scale (4 items; 5 = "strongly agree" and 1 = "strongly disagree")

- My manager frequently tells me about my job performance.
- I would like my manager to provide me with more frequent help and direction.
- My supervisor adequately informs me about company policies.
- My supervisor adequately informs me about my job activities.

Experience Scale (3 items)

- How long have you been at your present job?
- How long have you worked for this company?
- How long have you worked in a retail sales job?

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#### Acknowledgement

The authors wish to gratefully acknowledge the College of Business Administration Research Committee at the University of Minnesota for its financial support of this project.

COST EFFECTIVENESS OF MARKETING CHANNELS  
USED BY THE PROPERTY AND LIABILITY INSURANCE INDUSTRY

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Abstract

The relative cost effectiveness of distribution channels used in the property and liability insurance industry was determined through multiple regression analysis. Study results suggest that a step function exists which describes the relative costliness of the various distribution systems. In the current study, the highest cost system appeared to be the independent agency system, followed by the exclusive agency system. Next was the salaried employee system, and finally the mail order system.

Introduction

The oldest and most firmly entrenched marketing channel in the property and liability insurance industry is the independent agency system, often referred to as the American Agency System. Today, it continues to be important, accounting for over 60% of written premiums in 1976. Other marketing systems are the exclusive agency system, the salaried employee system, and the mail order system. Independent agents are independent contractors who are compensated by insurance companies strictly on a commission basis. The Internal Revenue Service views them as self-employed persons and requires social security taxes be paid on that basis. The most important characteristic in terms of differentiating independent agents is the fact that they represent more than one insurance company in a particular line of insurance business and they own the expirations of the business they produce. That is, they have no obligation, upon expiration of a customer's coverage, to insure the customer with the same insurance company again. It is argued that independent agents can provide better service because of this freedom.

The exclusive agency system (used by State Farm, Nationwide) likewise involves agents who are independent contractors. However, exclusive agents are forbidden by the provisions of their contract to represent more than one company in a particular line. Other companies utilize salaried employees to represent them. Representatives of such companies are considered as employees rather than independent contractors and are treated as such for social security purposes. As one would expect, they represent only one company. Finally, there are a few insurance companies that have no one representing them to the public but rely on advertising, telephone, and the mail to solicit and service insurance business.

The purpose of this paper is to examine the cost functions of property and liability insurance companies and determine what is the relative cost effectiveness of the four marketing channels (independent agents, exclusive agents, salaried employees, and mail order). Multiple regression is employed on a very broad sample encompassing over 90% of the written premiums in 1976. The insurance companies included were identified from Best's Aggregates and Averages [1977] and Best's Insurance Reports, Property and Liability Edition [1977]. Data for each of the variables in the regressions were also obtained from Best's Aggregates and Averages and Best's Insurance Reports. With respect to form of distribution system used, when these data

sources were unclear, firms were contacted directly by telephone.

The Cost Model

The dependent variable for the multiple regression is total expenses. The following independent variables were run: (1) earned premiums in 1976 as an indication of scale, (2) degree of concentration in particular lines of insurance usually designated as "personal lines," (3) degree of reliance on non-property and liability revenues as measured by life and health insurance earned premiums, and (4) a dummy variable designating one of the four distribution systems discussed above.

The model was designed to explore the existence of economies to large scale operation. The scale variable (earned premiums) served to measure this phenomenon. The economies of scale findings are reported in Johnson, Flanigan, and Weisbart [3] and discussion here is beyond the scope of this paper.

Cost Effectiveness of Channels

Regressions were run on the data two ways. First, each separate insurance company was treated as an independent data point without regard to affiliation with other companies. Second, the companies were collected into "groups" reflecting the widespread use of the holding company in property and liability insurance. Origins of the group phenomena are traced back to now eliminated regulatory restrictions on underwriting. Up until the post-World War II era "fire insurance companies" were not allowed to write casualty insurance (liability, workers' compensation, crime, glass, boiler). Likewise, casualty companies could not write fire insurance (including in addition to fire and allied lines, marine and business interruption insurance). To circumvent these restrictions, insurers formed groups through the holding company mechanism. In this way, an agent could represent a group and have available both fire and casualty insurance. The second regression run views the data with companies combined into groups. For a thorough discussion of the group phenomenon, see Kip [5].

The researchers endeavored to incorporate as large a sample as possible. It was necessary to include very large and very small companies--the result being a wide range in company size. To facilitate analysis, the sample was stratified into small, medium, and large insurance companies.

Findings

Results for insurance companies treated independently and in groups were similar. The variable representing the exclusive agency method of distribution was held out of the equation. Therefore, the coefficients presented in Tables 1 and 2 represent operating performance of firms with other distribution systems relative to firms with exclusive agency systems. In most runs for firms in the small- and medium-size categories, the coefficient for the variable representing firms which use

independent agents was statistically significant and positive. In regression runs for firms in the large-size category, this coefficient was not significant. The coefficient of the variable representing the firms which use the salaried employee distribution system was consistently significant and negative, both when firms were treated as independent and when they were collected into groups.

The results suggest a step-type function, with exclusive agency firms exhibiting relatively lower costs than independent agency firms but relatively higher costs than salaried employee firms. However, among large firms, the step function is reduced to two steps as no significant cost differences are revealed between independent agency companies and exclusive agency companies.

Since there were only four firms in the study which operated with a mail-order distribution system, generalizations about that system's costs per dollar of premium should be made carefully. Two of the four firms fell into the small-size category and the other two were classified as large firms. The two small mail-order firms had operating expenses higher than the average of the independent agency firms. The two large mail-order firms had operating expenses lower than the average of firms using the other three types of distribution systems. The finding that small mail order companies are high cost perhaps reflects expanded home office activity occasioned by the need to maintain an extensive mail order department. That is compatible with the finding that large mail order companies are relatively low cost--they are able to exploit the economies of large scale operation.

TABLE 1  
TOTAL OPERATING COST:  
FIRMS TREATED AS INDEPENDENT ENTITIES\*

Output Category	Relative Costliness Compared to Exclusive Agency Channel				R <sup>2</sup>	N
	Independent Agency	Salaried Employee	Mail Order			
Small					.738	150
Medium	0.206 (.055)	-0.302 (.089)			.822	68
Large		-0.211 (.047)	-0.227 (.074)		.983	41

\*All coefficients significant at 5% level

TABLE 2  
TOTAL OPERATING COSTS:  
FIRMS AGGREGATED INTO GROUPS\*

Output Category	Relative Costliness Compared to Exclusive Agency Channel				R <sup>2</sup>	N
	Independent Agency	Salaried Employee	Mail Order			
Small	NO SIGNIFICANT RELATIONSHIPS WITH ANY INDEPENDENT VARIABLE OR GROUP OF VARIABLES					
Medium	0.204 (.085)	-0.267 (.117)			.767	34
Large		-0.179 (.059)	-0.304 (.081)		.977	40

\*All coefficients significant at 5% level

## Conclusions

The relative cost-effectiveness of distribution channels used in the property and liability insurance industry was determined through multiple regression analysis. Four types of distribution channels were studied: (1) the independent-agency channel; (2) exclusive-agency channel; (3) salaried-employee channel; and (4) mail-order channel.

Results indicated that cost relativities across the distribution systems were not uniform for insurers of all sizes when the population was segmented into small, medium, and large insurers. For small insurers, the regression results indicated that there were no differences in expenses which could be explained by distribution channels. That is, after controlling for other variables, no group of insurers was more efficient than any other with groups defined according to the distribution system their constituents employ.

For medium-size insurers, some differences were discovered. Companies using the independent-agency system had higher expenses than either exclusive agency system companies or salaried employee companies. There were no mail order companies in the medium group. Moreover, the salaried-employee companies had lower expenses than the exclusive-agency companies.

For large companies, there were no differences between companies using independent agents and those using exclusive agents. Large companies using salaried employees had lower expenses than companies using either independent agents or exclusive agents. On the other hand, large mail order companies had the lowest expenses of all large companies.

In generalizing these results, it can be said the alleged cost inferiority of the independent agency system is not factually based for all sized companies. It appears that although there may be some innate cost inferiority in the independent agency system, companies with large scale operations have found ways to overcome these problems.

A second major generalization has to do with the three distribution systems (exclusive agents, salaried employees, and mail order) that have been called "everybody else" by most researchers. The results clearly show that cost differences exist among these three categories; and, as might be expected, the distribution system which provides the least amount of service--the mail order system--has the lowest relative cost.

In summary, the evidence indicates there exists a step function that describes the relative costliness of the various distribution systems. The most costly is the independent agency system, followed by the exclusive agency system. Next is the salaried employee system, and finally the mail order system. But the relationship is not unambiguous. It apparently does not exist among the small insurance companies. For middle-size companies, the step function clearly exists although there are no mail order companies in that group. The large companies demonstrate the convergence of the exclusive agency system and the independent agency system. There were no cost differences discovered.

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LOGISTICS MODELING IN THE 1980's  
A DECADE OF CHALLENGES

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Abstract

The area of logistics will face considerable environmental changes in the next decade. These changes will create many challenges for logistics modeling efforts. These challenges, to a large degree, are delineated by logistics modeling in the 1970's. A review of modeling efforts in logistics in the last decade is presented. The next decade and the role of logistics modeling are discussed in terms of what the author considers to be the major factors affecting logistics in the 1980's.

Introduction

One of the greatest modern boons to logistics decision making has been the emergence of computer modeling. Computer models have not only aided the manager in solving specific problems, but also in planning and controlling corporate activities. More than any other management area, logistics deals in decisions and activities which can be based on "hard" data. Hard data is derived from activities which are readily quantifiable, such as inventory levels and transportation times. This is contrasted to such "soft" data as consumer buying intentions and opinions. The amenability of logistics data to computer modeling has led to a multitude of models developed over the last twenty years for application to logistics. However, many environmental factors have drastically affected logistical activities in the last decade. Supply shortages, rising fuel cost, carrier deregulation, and inflation are but a few of these factors. One of the major challenges facing logisticians in the next decade is to develop and apply new and existing computer models to plan and prepare for further environmental changes in the 1980's.

This article attempts to set the stage for such a challenge. To establish a foundation for this challenge, a review and categorization of previous logistics computer modeling efforts in the last decade is presented. From this base, the author attempts to present some directions for future logistics modeling efforts. To accomplish this, environmental trends which may potentially affect logistics are discussed and the necessary modeling efforts to meet each environmental challenge presented.

Logistics Modeling in the Last Decade

The decade of the 1970's can be characterized as the period in which the greatest strides in the development of computer models applicable to logistics took place. These models can be categorized as optimizing or simulation models. Optimizing techniques include a wide range of particular techniques (for example, linear programming, mixed integer programming, and dynamic programming), but all are characterized by the fact that an attempt is made to find the optimal solution with respect to some criterion. This optimizing ability is quite useful, but the data and calculation requirements for such techniques often make them infeasible for large scale problems. Simulation models utilize mathematical relationships to replicate a given system, but make no attempt at finding an optimal

solution. Although the advantage of optimality is lost, simulation models are typically more flexible and comprehensive than optimizing techniques. Therefore, they can normally handle large scale and a larger variety of problems.

The areas of logistics where modeling efforts have been concentrated can be divided into facility location, terminal operations analysis, routing and scheduling, and logistics system design.\* Each area can be further divided by whether the major emphasis of the modeling effort was an optimizing or simulation approach.

Facility Location

A great deal of modeling effort in the 1970's has been devoted to the area of facility location. This area concerns the decisions of how many inventory stocking facilities to have, where to locate these facilities, how they should be supplied, and which demand points each should service. Although much effort in the early 1970's consisted of simulation models of the facility location problem, the majority of the efforts in the last decade have been optimizing models.

Terminal Analysis

Terminal analysis models examine the activities associated with the internal operation of logistics terminals. These activities include inbound and outbound schedules, materials handling, and loading and unloading problems. All of the models encountered were activity specific in that each dealt with a particular terminal activity, but none of the models dealt with all of these activities. The models found in this area were, for the most part, simulation approaches. Although the models were specific with respect to terminal activities, apparently any given activity was sufficiently complex to warrant the use of a simulation approach over optimization. Only two optimizing models were encountered.

Routing and Scheduling

By far the greatest number of modeling efforts over the last twenty years have been in the area of routing and scheduling, defined respectively as the decisions concerning the geographic movement and timing of specific shipments and/or transport vehicles. However, the majority of these models were developed prior to 1970. Few research efforts in the area appear to have been undertaken since that time. Logistics modelers are apparently sufficiently satisfied with the present state-of-the-art in routing and scheduling models and/or their attention has been directed primarily to the other areas of logistics modeling. The majority of these modeling efforts have been optimizing approaches, but a few simulation models do exist.

\*For a more complete discussion and sources of logistics models developed over the last thirty years see: John T. Mentzer, "The Challenges Facing Logistics Modeling in the 1980's," Journal of Business Logistics (submitted for review).

## Logistics System Design

Efforts classified as logistics system design models are distinguished from the other modeling areas by the fact that an attempt is made to give a comprehensive treatment of the logistics system, rather than only one aspect of the system. This comprehensive treatment often includes such logistics aspects as facility number and locations, transportation, inventory control, forecasting, routing and scheduling, sourcing, and often a multiechelon structure. By far, the greatest number of models developed under this category have taken a simulation approach. This is probably due to the fact that optimizing models are limited in the size of problems which can be undertaken. Therefore, the broader perspective simulation models seem more suited to logistics system design applications.

### Summary

An attempt has been made to present a brief overview of modeling in logistics in the decade prior to 1980. These modeling efforts appear to have moved from the treatment of specific logistics areas (routing and scheduling, for example) in the early 1960's to more of an orientation toward overall logistics system design in the 1970's. Further, the more comprehensive the logistics problem, the more often simulation analysis seems to be utilized. The more specific the problem, the more an optimizing technique is utilized. This would indicate that logisticians in the past have recognized the advantage of optimization and have utilized this approach whenever the problem was not too comprehensive to be solved through optimization. When this point was reached, simulation has been utilized. This tendency is illustrated by the fact that the majority of the simulation models developed have been in the area of logistics system design. In the more specific areas of facility location and routing and scheduling, the preponderance of optimizing models exist. Several attempts have been made at combining the advantages of optimization and simulation into one model. This approach should become much more useful and popular in the 1980's.

### Future Directions

Utilizing the last ten years of logistics modeling as a foundation, the remainder of this article will be devoted to the discussion of the future role of computer modeling in logistics. To accomplish this, logistics modeling will be discussed in the context of what the author views as the five issues which will exert the primary impact upon logistics in the next decade.

### Energy

Probably the most dramatic scenario for the 1980's is the increasingly severe shortage of petroleum based energy. Particularly hard struck by this global shortage is the transportation industry. Where many other industries have the option, however expensive it may be, to switch to such alternative energy sources as coal or hydroelectric power, the transportation industry is limited, in the short run, to petroleum based technology. This shortage of fuel has created a dangerous environment for logistics. Fuel prices have skyrocketed over the last several years. With recent increases in OPEC prices for crude oil, fuel prices should continue to increase in the future. This trend puts a considerable profit squeeze on carriers and shippers alike. The shortened supply of fuel oil has raised the potential of less stations in the future, regional spot fuel shortages, and even government rationing. The shortage

of fuel places a heavy burden upon logisticians to increase the efficiency of the transportation industry. The challenge to computer modelers is how to aid in this effort. Primarily, more effective routing and scheduling models will have to be developed which consider not only the time, direction, and volume of shipments, but also the routes that will minimize fuel consumption and will allow for fueling stops where supplies are ample and the price is lowest. For example, National Airlines' new fuel management and allocation system kept flights on schedule during the 1979 fuel shortages and saved the company \$500,000 per month in fuel costs. The system accomplished this by storing data on fuel prices and availability, along with storage costs and fuel capacity at each of the 30 cities National serves (Business Week, January 21, 1980). The next decade will see a rebirth of such routing and scheduling models with fuel constraints included.

The need for fuel efficiency will also create a greater emphasis in the future on freight consolidation. Less than volume loads will become increasingly costly as fuel costs continue to climb. Therefore, future logistics system design models will assign demand to inventory locations not only to augment inventory costs and customer service, but also to maximize full load shipments and, thus, fuel utilization.

In a related problem, many routing models of the next decade will address the problem of the empty backhaul, along with present shipment routing and freight consolidation problems (Mentzer and Cosmas, 1979). With rising fuel costs, the situation of a large number of empty backhauls will rapidly become a cost burden most carriers cannot survive. New means of routing and scheduling to eliminate the majority of these hauls will have to be developed. The analysis necessary to evaluate these means will be performed on logistics models of the next decade.

### Productivity

Most areas of industry have seen marked decreases in productivity over the last decade. The decline in output per labor hour and per equipment hour shows no signs of abating in the 1980's. The spiraling costs of labor and equipment have further exacerbated the decrease in productivity in money terms. The decrease in labor productivity has had a marked effect upon the characteristically labor intense area of logistics. Further, the restrictions by many states on length and weight requirements for trailers has imposed an additional decrease in equipment productivity upon the motor carrier industry. In answer to the decrease in labor productivity, the next decade should witness an even greater shift toward automation of logistics activities. Warehouse management, materials handling, and order communication and processing represent the logistics activities most amenable to automation. Such warehouse management activities as scheduling receiving and shipping priorities and operation, designing storage layout and inventory flow, and rack and aisle design and location will become increasingly automated activities in the future. Terminal analysis models and smaller versions of logistics system design models will play an increasingly important role in assisting logistics managers to design and manage these activities.

The area of materials handling will see a wider utilization of automated delivery and order picking systems. Terminal analysis models will fulfill the role of planning such automated systems and the mechanized systems to support them. Such factors as the costs and benefits of the proposed system, material flow analysis, and shipment scheduling will all be incorporated in the analysis.

The communication and processing of orders in many present day systems is extremely labor intensive. Whether orders are sent by telephone or mail, if clerks perform the process at both ends, considerable labor can be involved. Inventory systems of the 1980's will move more toward the utilization of checkout counter terminal activated systems. These systems utilize sales data from the checkout registers to monitor inventory levels and to automatically place orders when a prespecified reorder point is reached. Although these systems can save considerable time and money invested in manual processing of orders, they are not cost effective for all firms. Cost/benefit analysis of these systems for specific firms will be a role for logistics models. The costs and potential savings of such systems and which products to include and which to order manually are all questions to be answered by logistics models in the next decade.

The decrease in equipment productivity in the motor carrier industry will reemphasize the importance of equipment routing and scheduling models in the future. Previous routing and scheduling models will be revised in the future to reflect the increased cost of equipment and, therefore, the increased importance of maximization of equipment utilization. This increased importance will also aid in the proliferation of containerized shipments in the future. Containerization creates a whole new problem for routing and scheduling models. Specifically, future models will have to cope with the situation where the transport vehicles and the containers must be routed and scheduled together and separately.

#### Regulation

Although many industries will be coping with increased regulation of their activities in the 1980's, the area of logistics is facing the unique situation of attempting to plan for impending deregulation of the transportation industry. The airline industry began the deregulation process in 1977 with planned discontinuance of the CAB midway through the next decade (Forbes, January 8, 1979). Considerable efforts are presently underway to also deregulate the motor carrier and railroad industries (Mentzer and Krapfel, 1980). Of considerable interest to regulators and industry participants should be the effect deregulation will have upon the shippers and carriers. One role of computer modeling in the area of logistics regulation will be to develop behavioral models of the effect deregulation of the various modes of transportation will have on carriers and shippers. One such modeling effort to determine shipper reaction to motor carrier deregulation is presently underway (Mentzer and Krapfel, 1979), but further models of carriers in the motor carrier industry and carriers and shippers in the railroad industry should be undertaken.

Certain ecological regulatory actions have had a particular effect upon logistics. As mentioned previously, regulations limiting the length and weight of trucks - limits concerned with safety and road damage - have limited productivity. In addition, pollution control devices are a noble step toward limiting harmful emissions, but they have also increased fuel consumption and, therefore, raised operating costs. Again, models designed to analyze these decreases in productivity due to ecological regulation will be developed.

A particular problem created by ecological regulation is the situation of reverse logistics (Bowersox, 1978). Several states and counties have passed laws banning the sale of products in non-returnable containers. These laws have created a scenario where companies must develop not only logistics systems to distribute their

products to the final consumer, but also a system to return the containers to the manufacturer. Since most systems are presently designed as a one-way physical flow to the customer, this problem presents one of the greatest challenges facing logistics modeling for the next decade. Modeling efforts must be directed toward the goal of developing logistics design systems that adapt present systems so that costs are minimized and customer service maximized in the flow-to-the-customer segment of the system and costs are minimized and production scheduling augmented in the return-flow segment of what can be called the two way flow logistics system of the 1980's.

#### Economic/Market Conditions

The economic conditions faced by the western world have reached near crisis conditions. An economy where shortages are an expected condition, inflation refuses to drop below double digit figures, and most economists have been predicting a recession for almost a year, now is a reality for the United States. Many economists see these conditions continuing far into the 1980's (Business Week, December 31, 1979; Forbes, January 7, 1980; and Fortune, January 14, 1980). Shortages will place a growing dependence in materials management upon establishing continuity of supply and alternative sources for required raw materials. Logistics system design models of the future will be forced to devote more attention to contingency analysis to determine the consequences and alternatives to the discontinuance of supply of raw materials to the corporate logistics system.

The combined economic conditions of inflation and recession will place a monumental profit squeeze upon the corporation and logistics in particular. In conjunction with decreases in productivity, rising fuel, capital, and labor costs will make efficiency in logistics operations no longer a desirable goal, but a necessary precondition for corporate survival. Without such efficiency, the overwhelming weight of logistics costs - which already represents such a large proportion of the corporate cost structure - will make survival impossible in the economic climate of the next decade. Therefore, the challenge facing logistics modeling is the task of designing new systems and methods of operation to increase logistical efficiency. System design models will analyze such decisions as the efficacy of public versus private truck fleets and warehouses. Facility location models will have as additional criteria the minimization of shipping costs and sourcing of reliable, continuous raw material locations. Routing and scheduling models will have to squeeze the maximum obtainable efficiency from transport vehicles and containers. Finally, terminal analysis models will face the challenge of even greater efficiency in materials handling and inventory control.

Despite the potentially dire economic conditions presented by the 1980's, market conditions will present many opportunities for marketing oriented firms. New and more accurately defined market segments will be catered to by well-designed product/service offerings. For example, for the first time the over 45 year old market will represent 53.9 per cent of the households and 59.9 per cent of the spending power in the 1980's (Business Week, November 19, 1979). Marketing efforts to successfully tap this market will differ markedly from efforts to reach the youth-oriented markets of the 1st decade. New marketing strategies will also require new methods of distribution to reach these markets. More to the point, logistics systems will need more flexibility to adjust to serving a myriad of market segments, whose composition and importance are changing over time. Logistics system design models

will play a necessary part in designing systems which are effective and profitable.

The introduction and market acceptance of new products and new variations of existing products will also present challenges to logistics and logistics modeling in the next decade. The potential exists for the introduction of radically different product forms, which will require new methods of distribution. For instance, many experts in the food marketing industry believe the high cost of energy will force the development of a new wave of dehydrated food products (Struse, 1979). Since many present food products are up to 95 per cent water, these new dehydrated products will drastically change present transportation and storage methods. The corporation marketing these and other new products in the future must begin now to plan the logistics system necessary to support the new marketing plan. Such new system design represents a challenge to logistics system design models of the future.

#### Technical Trends/Orientation

The application of technological developments in the area of logistics has been considerable over the last thirty years. The wide application of control techniques and computer models discussed earlier bears witness to the technical orientation of logisticians at this point in time. However, the demands of the next decade will require new and innovative trends in modeling efforts and revamped technical orientations among logisticians. The antithetical advantages and disadvantages of simulation and optimizing techniques will provide the impetus for the development of hybrid models, combining both simulation and optimizing algorithms into a single model. Although some hybrid models presently exist, the large number of factors to be considered and the need for optimal answers will probably create a trend toward the majority of logistics system design models having hybrid characteristics. For example, logistics system design models of the future will provide the simulation ability to realistically replicate logistics systems and perform contingency analysis. However, the inventory sourcing, transportation routing and scheduling, facility location, and materials flow decisions of the models will be turned over to optimizing algorithms. Therefore, single logistics system design models will provide the flexibility, reality, and ability to handle large scale systems inherent to simulation models and the benefits of optimal solutions inherent to optimizing models.

A new orientation of the next decade will present itself as logistics managers attempt to capitalize upon the profit generating potential of logistics. This profit generating potential lies in the area of customer service. Whereas logistics has been traditionally looked upon as a cost center, the area of customer service provides a competitive, profit generating variable comparable to pricing, product design, and promotional campaigns. For instance, if two companies market identical product, promotional, and price offerings, but one company guarantees next day delivery and the other two week delivery, clearly the former will be at a competitive advantage. The problem confronting logistics managers is how to measure the effect of different levels of customer service upon customer behavior. Other areas of marketing have been investigated extensively through consumer behavior models. In the next decade the behavioral dimensions of logistics variables will be investigated more fully. Models which measure the logistics costs of various levels of customer service will be joined with models which measure the effect of customer service upon buyer behavior and, ultimately, corporate sales revenue. These

consumer behavior/logistics models will provide an instrument through which logistics managers can perform cost/benefit analysis to determine the optimal customer service level for their particular firm.

A further development in this area of behavioral models will be efforts to model the interaction and management of the production/marketing/logistics interface. For over a decade, the advantages of a system approach to management has been discussed by practitioners and academicians alike. The systems approach, simply stated, advocates the coordination of all management areas to the optimization of the corporate goals (La Lande, 1976). A necessary precondition to this is the establishment and management of the goals of production, marketing, and logistics in such a way as to support the corporate goals. For example, if market research leads to a corporate goal of a 90 per cent customer service level for a particular product line, the goals of logistics and production should be adjusted to meet this goal. However, production and logistics costs should be considered in the customer service level decision. Thus, the interaction, negotiation, and coordination necessary between the production/marketing/logistics interface must be studied more fully before the systems approach can be realized. To accomplish this analysis, models will be developed not only to study the cost/benefit interrelationships of the production/marketing/logistics interface, but also the inherent behavioral dimensions.

#### Conclusions

A multitude of environmental factors will impact upon logistics management in the next decade. These factors have been discussed under the headings of energy, productivity, regulation, economic/market conditions, and technical trends/orientation. Each of these areas will present particular challenges for logistics models. Continued shortages of raw materials will lead to new facility location models which emphasize, in addition to the traditional location factors, the importance of continuity of supply from various locations. Constraints placed upon the transportation industry by decreasing labor and equipment productivity, increased containerized intermodal shipments, ecological regulations, and skyrocketing energy costs will precipitate a renaissance in the area of routing and scheduling models. These models will be similar to earlier efforts, but will place increased emphasis upon these new environmental factors. The need for increased efficiency in warehousing and materials handling activities will lead to new terminal analysis models to evaluate alternative automated systems. Energy and supply constraints upon sourcing, deregulatory moves, reverse logistics, checkout register inventory control systems, new and changing market segments and products, and the increasing importance of economic efficiency are all going to exert considerable influence upon logistics systems in the next decade. New logistics system design models will evolve to aid logistics managers in developing and analyzing these new systems. In addition, hybrid models--combinations of simulation and optimization--will be developed to help cope with this myriad of decision areas. Finally, models will be developed to investigate more fully the behavioral areas of logistics. Specifically, models of affected party reactions to deregulation of the transportation industry, consumer behavior/logistics models to analyze the effect of different levels of customer service on customer buying habits, and models of the production/marketing/logistics interface will be developed. Many of the new developments and applications of logistics models in the 1980's will be extensions and adaptations of the modeling efforts undertaken over the last twenty

years. Most of this will consist of the incorporation of new factors into presently available models. New work will primarily be in the areas of hybrid models and behavioral logistics models.

A final reminder of lessons learned in past logistics modeling efforts should be reemphasized for the future. Logistics models are not intended as solutions to logistics problems, but merely as instruments for analyzing these problems. The challenges facing logistics modelers in the 1980's are to develop models to effectively analyze the next decade's logistics problems. The challenges facing logistics managers are to utilize these models to solve the problems and meet the opportunities of the next decade through application of these new models.

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## Abstract

This article suggests a limitation on the use of the term "psychographics" to those studies utilizing a uniquely marketing oriented assessment technique. The appropriateness of psychometric validation techniques for this form of psychographic method is explored. The argument is proposed that the logic of the psychometric approach is inappropriate to this particular assessment problem. A more appropriate rationale is suggested for the reliability and validity issues, in light of the unusual characteristics and objectives of this emerging technique. The discussion concludes with a suggested rationale for the development of theoretical links between consumer behavior and the behavior being measured with this new approach.

## Introduction

"Man is the measure of all things..." Protagoras

Whether or not man is the measure of all things, as Protagoras proposed, he certainly is the measurer of all things. One of his latest forays into the realm of measurement is psychographics. It has been receiving increased attention in marketing research as a segmentation technique. The term psychographics seems, on the face of it, to be an amalgam of the terms psychometrics and demographics. Unfortunately, as Wells has pointed out, (Wells, 1975) no single definition has met with general approval. Currently, the term seems to encompass any use of psychological testing for marketing purposes. However, there is a distinctly different method emerging in this marketing madness which deserves to be considered and not to be led astray by inappropriate concern over psychometric issues.

The uniqueness of the psychographic approach is still developing. However, it centers around the creation of "behavioral averages" across a multi-attribute space in a heterogeneous market of individuals. The real interest is not on utilizing individual, unidimensional constructs (eg. personality traits) to predict consumer behavior in individuals. Such studies have been done, but this author believes they have been inappropriately lumped into what is emerging as psychographic method. This uniquely marketing oriented approach is focussed on extracting consumer profiles representing clusters (not individuals) of behavioral "types" (multidimensional constructs) comprising various proportions of a given market.

The two reviews of psychographic techniques by Kassarian and Wells (Kassarian, 1971; Wells, 1975) presented excellent profiles of the benefits and drawbacks of state-of-the-art psychographic studies. Kassarian seemed to be advocating more widespread application of the techniques of psychological test construction to the development of psychographic scales for general marketing use. This would eliminate the need to borrow or "jury-rig" scales which have no theoretical connection to the behavior being studied. (Wells, 1975) Kassarian apparently sees a closer approach to psychometric methods as the appropriate direction for psychographic methods. It will be suggested that this would be inappropriate.

## The Psychometric Approach

A brief review of the issues involved in a psychometric approach might serve useful as a springboard for further discussion of its appropriateness. A psychometric approach to the technique of psychographics would demand an attempt to determine both the reliability and the validity of psychographic instruments. There would seem to be little to dispute in this objective, as the literature is sparse on both counts.

## Reliability

Reliability is usually ascertained by a correlation coefficient between two measurements obtained in the same manner, i.e., either taken at different times (test-retest) or with equivalent forms or split-half techniques (internal consistency). The coefficient tells what proportion of the variance is non-error variance. Reliability coefficients are affected by the length (number of items) of the instrument and the spread of scores in the group studied.

There are two general principles that it is useful to remember when conducting reliability analyses. 1.) A summated score from the individual items in an instrument will have greater reliability than the individual items themselves; and 2.) The spread of scores can produce low reliabilities even though most respondents answer identically both times. If there is low variance (no spread of scores on particular items), the denominator will be small and small changes (only a few people) on the second measurement can inflate the differences out of proportion to their actual significance.

These principles embody the statistical dynamics which make psychometric reliability techniques unnecessary and inappropriate for most psychographic studies. However, the sources of variance in response (and, hence, reliability) are always present. (Thorndike, 1949)

These factors are precisely what we mean when we refer to a human being's individuality. When the objective is to clearly and unambiguously detect the presence or absence of a specific psychological state (or trait) within a particular individual, these sources of variance constitute a major hurdle. However, when the objective is to detect similarities in response behavior between individuals (stereotyping) embedded in a multi-dimensional person-attribute space, utilizing large samples and aggregating at the group level (not one individual), these sources of variance lose their impact as "random errors tend to cancel and overall averages and percentages tend to be quite stable." (Wells, 1975, p. 203)

## Validity

The application of any instrument to decision making tasks requires, even more than reliability, that it be valid. Validity means the measure actually represents what it is supposed to measure. This area is considerably more complex and difficult to assess. The types of validity normally considered are:

1. Face or consensus validity exists when a measure 'looks as if' it should indicate a particular concept or variable.



2. Predictive or concurrent validity exists when a particular measure predicts (is correlated with) some criterion measure. This is sometimes termed convergent validity, meaning the measure correlates or 'converges' with other supposed measures of the variable in question, showing that the correlation is not spurious.
3. Discriminant Validity exists when the measure is uncorrelated with other measures NOT supposed to reflect the variable of interest.
4. Construct Validity is considered only after the measures have been validated by the preceding criterion. It exists when a particular hypothetical construct, composed of several 'measures' actually operates in theoretically expected ways.

Validity also involves internal (to the instrument) considerations. Item analysis is used to construct a psychological test and insure that it unidimensionally measures the same thing (hopefully the trait it is supposed to measure). A correlation coefficient is computed between each item and the total score. All the items should correlate strongly with the total score, if the test is to be internally valid. This, we will see later, is a fundamental difference in objective which renders psychometric technique inappropriate for most of the emerging psychographic studies.

#### The Psychographic Approach

The necessity for both validity and reliability in any instrument is undisputed. However, the psychometric techniques typically used to establish these conditions to the satisfaction of potential users are not always mandated or appropriate. It will be argued that, Kassarian's suggestions notwithstanding, the psychometric measurement techniques are inappropriate for the emerging psychographic studies. As Wells stated quite clearly in his introduction to the applications section of his excellent review (Wells, 1975, p. 207)

...The real world discussion will argue that reliability and validity are neither necessary nor sufficient to insure that psychographic data can be used. (underlining mine)

It is important to recognize that Wells could NOT have meant that an instrument which is either invalid or unreliable can be presumed to have utility in any field of endeavor (not even in marketing). No conscientious marketing pundit, no matter how offhandedly, would suggest that reliability and validity are irrelevant for instruments used in marketing analyses. However, that is not the same as stating that psychometric validation and reliability testing are unnecessary (in fact, inappropriate) for most psychographic instruments. This is so because the psychographic approach can be shown to produce both with a more appropriate rationale.

#### Psychographic Validity

Validity, as we have seen, is many faceted. However, in the psychographic techniques we are discussing, construct validity is the major issue. To gain any insights into this issue, it is important to understand that the emphasis in psychometric validation is on insuring a correspondence between what is obtained (measured) and what is sought (trait). When we are dealing with the search for a unidimensional construct, such as a personality trait, this is of paramount importance. It is possible for the measure to reflect any number (perhaps infinite) of potential characteris-

tics of a human being, other than the one sought.

Psychographic validity, however, involves a multi-dimensional construct (a behavioral average) across a complex of characteristics (response tendencies). Unlike the psychologists, our level of concern is a relatively amorphous aggregate with stereotypical consistency assured to some degree by the law of large numbers. (Bass, Tigert, and Lonsdale, 1968) Therefore, construct validity in psychographics concerns this multi-dimensional behavioral average, and not any specific trait exhibited by any single individual. This reduces the psychographic validity problem to one of definition.

Construct validity involves both the theoretical and operational (measurement) aspects of a conceptual formulation. As Fiske pointed out, (Fiske, 1973)

...The investigation of construct validity must study a construct-operation unit, not a construct and some casually selected procedure for its measurement. The specific measuring procedure must be involved integrally in the total conceptual formulation being subjected to empirical test.

...Hence the delineation of the construct must itself identify at least one (and preferably more than one) specific measuring operation congruent with the conceptualization.

On this basis alone, the validity of many psychographic constructs is superior to any of the psychological tests currently in use. As stated, the construct we are seeking is a behavioral "average" of individuals who would characterize themselves in similar ways. Since the measurement (usually Q factor analysis or some other clustering technique) actually produces clusters of individuals who (on average) actually characterized themselves similarly, it becomes obvious that the construct and the measurement are operationally and theoretically the same! There is no validity issue, since the construct and the measure of it are identical.

This seems, on the surface, to avoid the issue of whether or not anyone possessing the characteristics in a given profile actually exists in the marketplace. But it does not. To ask whether anyone really possesses the characteristics is to ask whether there actually is an "average" man. Once the profiles are obtained, there can be no question but that there are clusters of individuals who, on that self-report inventory, have characterized themselves in very similar ways. The other obvious and more fundamentally important question of whether this behavior (characterizing oneself in given ways) is or is not related to any other behavior (consumer behavior) is not an issue involving the validity of the measure itself and will be discussed later.

#### Psychographic Reliability

The issue of measure reliability is relatively a "non-issue" in the sense used in psychological testing. In the first place, Cronbach has reported reliabilities of .80 and above for self-concept inventories. (Cronbach, 1960) Thus, at the level of the individual, self-concept seems to remain extremely stable. Consequently, even if psychometric reliability were an issue in psychographics, most psychographic studies (which use essentially self-concept inventories) could be expected to be fairly reliable. However, psychometric reliability, on the other hand, involves a cross-sectional analysis (inter-individual).

Psychometric reliability, while fundamentally related to psychographic reliability, is nonetheless inappropriate. In psychometrics, it is crucial to determine and correct the different degrees of reliability in the articulation of individual responses. These differences can be internal to the individuals (Thorn-dike, 1949) or external (in the construction of the data collection instrument). However, this reliability involves a univariate analysis of variance for a uni-dimensional construct.

Psychographic reliability has a different focus. Since the constructs in psychographics are like "averages" or central tendency representations of multi-dimensional objects (people) in a large population. These are inherently more stable. The fact that they are multi-dimensional creates different reliability issues because the intraindividual differences tend to "wash out" in the larger cross-sectional analysis. The primary focus is on systematic similarities among large numbers of individuals embedded in a multi-attribute space.

A particular stimulus (item) whatever its characteristics (ambiguity, semantic bias, and so on) can still reveal systematic behavioral similarities in response to it, as long as the level of analysis is not an individual but some amorphous "social average." In psychographics, the search is for these systematic tendencies possessed by various proportions of a population. If these tendencies exist, then the individual response reliabilities are likely to be affected systematically by them. The individual response reliabilities would tend to regress toward the systemic norm. A Q factor analysis should capitalize on these, as we shall see at the end of this discussion. Obviously, if there are no systematic behavioral differences underlying the responses, the reliabilities should be random and, therefore, cancel themselves out.

The point being proposed here is not immediately obvious. What is NOT being proposed is that the reliability of psychographic instruments is irrelevant because we are dealing with large numbers of people and "average" constructs. The central point is that reliability in the psychometric sense is an inappropriate consideration. Reliability for the conditions surrounding the emerging psychographic techniques involves multi-dimensional person-attribute spaces and usually some type of linear transformation or clustering in said space. As Wells suggested in his validity issues summary (inappropriately, by the way, since it is a reliability problem inherent in the techniques). (Wells, 1975)

...Marketers who make important decisions on the basis of segmentation studies urgently need ways to determine when the products of cluster analysis or Q factor analysis represent real groups of real consumers, and when they represent figments of the computer's imagination.

While this, on the surface, sounds like a validity issue, it is not. Obviously, the clusters represent "real groups of real consumers" (unless monkeys were clustered). The issue here is the reproducibility of the groups. This is more a function of the specific techniques used to generate the groups than any individual reliability in response to the items in the instrument. This varies widely by type of clustering technique, with Q factor being superior to most.

In short, what we do have as a reliability issue, is the reproducibility of the actual clustering from

sample to sample. This is largely a problem in techniques of linear transformations in a multi-attribute space. (Cooley and Sawyer, 1978; Morrison, 1967; Overall and Klett, 1972) Psychographic instruments, in the main, are disaggregated inventories serving as batteries for factor analytic analysis. Factor analytic theory is a specialization and extension of the more general theory of linear transformations in a multi-dimensional space. (Runnel, 1970). The reliability of the factor solutions involves different issues than those for aggregated unidimensional instruments (psychological inventories).

#### Psychographic Logic

The fundamental differences in logic and technique are brought to light most clearly by reference to Nunnally's description of faulty logic in developing a psychological test (unidimensional measure). (Nunnally, 1967, pp. 245-247)

...First you ask yourself, 'Why construct a test?' Then you answer, 'To predict a criterion.' If that were so, what would be the best items for the test? Obviously, items that individually correlate well with the criterion. The more each item correlates with the criterion, the more the total test score will correlate with the criterion.

He goes on to further refine this logic by suggesting that items which do not correlate with each other (but which highly correlate with the criterion) would be best. (Multicollinearity issue) This logic means that the maximum multiple correlation would be obtained when all items correlate highly with the criterion and zero with each other. Each item adds information and the linear transformation will correlate highly with the criterion. From a psychometric perspective (developing a unidimensional measure of a specific construct or trait) this logic is totally erroneous and unacceptable! However, since this logic is the logic of linear transformations, when developing an average behavioral type (a multi-dimensional construct) as in Q factor analysis, the logic is impeccable.

Factor analysis encompasses a number of techniques for establishing linear constructs which account for structural relations in matrices of intercorrelations. (Cooley and Lohnes, 1971; Morrison, 1967; Overall and Klett, 1972; Runnel, 1970) For Q factor analysis, the matrix of inter-correlations is among individuals presumed to reflect (by their self-report responses) different manifestations of similar fundamental behavioral types (presumably with respect to self-report behavior). In terms of representation of the correlation matrix, there are many equivalent factor solutions. However, some of the possible solutions may be more meaningful than others with respect to other information concerning the domain involved in the factor analytic study, and, consequently, more likely to be reproducible.

The Q factor analytic concept presupposes common causal elements in the intercorrelations between individuals. This is obviously a more tenable and palatable assumption than an assumption of causality between any two individuals. Therefore, the intuitive idea is that the extent of stereotypical behavior between two individuals is the result of their common possession of more basic attributes, presumably revealed in their responses to an array of items in a battery. In most psychographic studies, those items are the ways in which the individuals would characterize themselves in self-report inventories. (Johnson, 1974)

There is no guarantee that a poorly designed battery of self-reports will produce meaningful factors (types). However, for a well-designed experiment, employing a large sample size in a limited domain (such as consumption of one product), the analysis techniques will reveal whatever stereotypical consistencies are embedded in the intercorrelation matrix. When the battery and sample size are large and varied enough to overdetermine the results of the analysis, highly replicable results are possible. (Calantone and Sawyer, 1978) Calantone and Sawyer did not use a Q factor approach, but they did use a varimax factor analysis as input to another cluster technique with excellent results.

Normally in factor analysis, the battery size (number of items in the instrument) needed to overdetermine the solution depends on the number of factors to be extracted. However, in Q factor analysis, sample size is the relevant consideration, not battery size. This is so because the Q factor solution is a mirror operation of the usual factor problem. Thus, battery size plays the role that sample size would play in normal factor analysis, and vice-versa.

If we let  $n$  represent the sample size and  $m$  represent the battery size (number of items or attributes), the original data matrix,  $B$ , would be an  $n \times m$  matrix. In normal factor analysis, the correlation matrix to be factored,  $C$ , would be an  $m \times m$  matrix of column-wise intercorrelations between attributes (items). In Q factor analysis, the correlation matrix to be factored,  $R$ , would be an  $n \times n$  matrix of row-wise intercorrelations between individuals.

In Q factor analysis, therefore, the intercorrelations to be factored are a resultant of the degree of linearity in the responses between each pairing of individuals taken across the items in the instrument. The role normally played by sample size in the bivariate correlation of a sample, is played by the battery of items in the instrument. The two "variables" being correlated are the individuals. Their item responses are the "random replications", i.e., random sample of their individuality. In other words, the items are held constant by the random principle (a necessary assumption of the technique) and the individuals (variables) are presumed to vary. Each item is assumed to be a random replication of some aspect of the same "variable", i.e., a specific individual.

It is difficult for an individual, under such conditions, to respond in a way that does not reflect his individual variability, no matter what the item is. Since an individual's responses are his individuality, how does he unreliably reflect that? While it is possible for an individual to unreliably reflect, for example, his possession of the dominance trait, it is not possible for his responses to unreliably reflect his responses!

The techniques of Q factor analysis, therefore, can quite readily absorb randomness in responses to items in a battery (and, in fact, assumes it). Consequently, the items in a battery need not, (indeed should not) possess psychometric reliability. Good psychometric technique (and logic) has been shown to be the opposite of good factor analytic technique. However, the items should possess interpretive reliability, i.e., have been shown to be related consistently to the area of consumer profiles, even though it could not help but reliably reflect the individuality of the participants. A diverse selection of items, on the other hand, should tap the major dimensions (stereotypical consistencies) in a population (if they exist and can be represented by linear transformations).

The issue of psychographic reliability, therefore, has not disappeared. It has simply been transferred to a more appropriate arena than psychological test development (psychometrics). It is clearly more related (by theory) to econometric techniques. However, it is, strictly speaking, minimally related to both, and actually represents a unique development of marketing techniques.

The reliability of Q factor representations can be increased by a straightforward increase in sample size and an appropriate restriction of the numbers of factors (types) to be extracted. This is controlled by insuring that you have a sufficient number of distinct correlations to overdetermine the solution. The number of distinct correlations is the number on one side of the diagonal of the correlation matrix,  $R$  ( $n \times n$ ). This is given by  $n(n-1)/2$ . (Notice that only sample size appears).

If we let  $r$  equal the number of factors to be extracted, the number of distinct correlations to overdetermine the solution can be calculated. This is dictated by the number of independent factor weights in the solution. The number of independent factor weights can be found by determining the number of weights in the reduced ( $n \times r$ ) matrix of uncorrelated factors,  $A$ , which can be restricted to zero (without altering the fundamental factor analytic equality) and subtracting this number from  $nr$ , the number of elements in  $A$ .

The fundamental factor analytic equality in matrix notation is:

$$\underline{R} - \underline{U}^2 = \underline{AA}'$$

where:

$\underline{R}$  is the original correlation matrix ( $n \times n$ )  
 $\underline{U}^2$  is the diagonal matrix of unique variances (unexplained,  $n \times n$ )  
 $\underline{A}$  is the weigh matrix for uncorrelated common factors ( $n \times r$ ).

The number of weights in  $A$  which can be restricted to zero is  $r(r-1)/2$ . Therefore, the number of independent factor weights is given by  $nr - r(r-1)/2$ . In order to overdetermine the factor results, the number of distinct correlations ought to be somewhat greater than the number of independent factor weights, the greater the better. Thus, the basic inequality should be,

$$n(n-1)/2 > nr - r(r-1)/2$$

This should not tempt people using psychographics into thinking all of their problems can be solved by sample size. In particular, the utility of the measures (a separate issue) is a function of good experimental design. This involves adequate and well-articulated theories linking the behaviors being measured to the behaviors of interest. However, as we have seen, this does not involve the specific techniques and logic of psychological test development (psychometrics), but, rather is more appropriately couched in the theory of linear transformations in a multi-attribute space.

#### Application to Marketing

The issue of a theoretical connection from the behavior measured publicly characterizing oneself in given ways to other behaviors (consumer behavior) concerns the usefulness of the measure and not its validity or reliability. Fortunately for marketers, there should be a strong correspondence between how we would

characterize ourselves in a psychographic inventory, and how and what we consume. In fact, arguments for the existence of personality traits are considerably less convincing than those which might be advanced for "consumption traits."

We do not, as a general rule, consciously try to project specific personality characteristics, e.g., "Today I shall behave as an introspective, compliant, other-directed person. It should not be surprising, then, to find that self-report inventories requiring conscious articulation of personal characteristics are minimally useful, despite extensive validation. Our conscious attributions can be unrelated to our underlying personality (whatever that is). Consequently, the instruments must be devious and otherwise circum-spect to ferret out the "real you" from your conscious attributions and articulations.

We do, on the other hand, select our apparel and myriad other consumer products based on our conscious attributions about them and ourselves, e.g., "That suit (or dress) is not me;" or "I'm not the sports car type." In the main, our goods and services perform social functions. These functions are related to our desired public image. In many cases, we augment, establish, or alter our self-images by our consumption behavior. What or where we eat, how we dress, the kinds of products we use and don't use, are all ways we can use to express who we are.

For marketing purposes, therefore, we may not need or want to know the "real you," because it may not significantly impact on consumer behavior. The "desired you," however, can be of enormous interest. The attributions we would make about ourselves, various products and services, and the people who use them can directly tap into this dimension. Correctly devised instruments to measure these attributions (consumption inventories) should enable us to define "consumption traits" (routinized purchase dispositions) more effectively than any psychological inventory measures personality traits (routinized general response dispositions).

From a measurement standpoint, the information is in the conscious grasp of the subjects and they are positively motivated to project (in fact, do so out of hand) the very images and attributions we seek. Their conscious articulation of the needed information is accessible with self-report techniques. Psychologists only wish that were true of their instruments. Consequently, psychometrically unvalidated psychographic profiles are proving very useful. (Bernstein, 1978)

But you say these are such superficial measurements. The only way to obtain enduring prediction is to measure the "real traits" of an individual, not some inherently superficial and falsified social characteristics. In fact, we are forewarned in research methods courses to be wary of the "socially acceptable" answers, as though they contained no useful information. Bunk! They probably contain more useful marketing information than any in-depth psychoanalytic interview or battery of psychological tests ever could reveal. (Bernstein, 1978)

In short, what we are seeking are relatively fluid social constructs, no enduring and deep-rooted psychological characteristics. As the social significance of products, activities, and so on, changes, (as they will in our fast-paced society) the "consumption traits" will alter. This can occur (and probably does)

without any alteration on the human beings responding to the changes. Thus, even an Archie Bunker might switch his allegiances, preferences, and objects of admiration with the times. Nevertheless, he is still Archie, and he represents a distinct proportion of society (though he is perhaps an extreme caricature of the type). Therefore, his new "consumption traits" (on average) are still likely to be representative of all such "Archie Bunker" types.

Market segmentation, ad campaign development, and other marketing strategies and tasks, therefore, can be aided by psychographic profiles revealing such things as, how people of a certain type would characterize themselves, what they consume, what they think of various products, and what they would identify themselves with (publicly). (Bass, Pessemier and Tigert, 1969; Wells, 1975) From a marketing standpoint, it makes little difference whether a particular person identifies with a certain life style because of introversion, extroversion, or perversion! What is relevant to marketing analysis, is that for given proportions of the market there is public identification with various life styles and this corresponds to consumption preferences. The proportions of a given market who possess certain "consumption traits" should be fairly stable in the short run. The value to marketing of such profiles cannot be overstated. (Bernstein, 1978).

In conclusion, what we have called "emerging psychographic technique" represents a uniquely marketing oriented approach to assessment and an enormously valuable source of marketing data. We must be very sure that we do not belie its usefulness by asking it to meet inappropriate validity and reliability objectives. Unlike the psychometric techniques, we do not seek to accurately measure a specific unidimensional construct clearly and unambiguously. Our objective in psychographics is to represent a nebulous and complex multidimensional construct (a "type" of human being) by some amorphous "average" pattern of exhibited social behaviors (self-report behaviors) thought to be closely related to other social behaviors, i.e., consumption habits. The validity issue, as we have seen, disappears by definition, and the reliability takes on different (inherently more stable) characteristics by the assumptions and techniques of the approach. The interpretation issue remains the most important one, and should be our major focus when we construct items for inclusion in such studies.

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## MARKET SEGMENTATION: A NEW LOOK AT AN OLD TOPIC

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### Abstract

This paper reexamines the concept of market segmentation from the viewpoint of individuation-deindividuation theory and research, and discusses how this theoretical base may be applied to direct market segmentation strategies.

### Introduction

Stanton (1978) defines market segmentation as "The process of taking the total, heterogeneous market for a product and dividing it into several submarkets or segments, each of which tends to be homogeneous in all significant aspects". Market segmentation can aid the marketing strategy of a firm by, as Yankelovich (1964, pg. 83) has noted:

1. Channeling money and effort to the potentially most profitable markets
2. Designing products that really match market demands
3. Determining what promotional appeals will be more effective for the company
4. Choosing advertising media more intelligently and determining how to better allocate the budget among the various media
5. Setting the timing of the promotional efforts so that they are heaviest during those times when response is likely to be at its peak

Market segmentation is, of course, a much utilized and a much researched notion (e.g. Twedt, 1964; Wilson, 1964; Day, Shock, and Srivastava, 1979; Roberts and Wortzel, 1979; Sewall, 1979), in the marketing discipline. Academics have, for example, debated the benefits of segmentation versus positioning (e.g. Smith, 1956), discussed analytical segmentation techniques (e.g. Frank and Green, 1968) and have researched the "best" ways of segmenting a market (e.g. Haley, 1968; Frank, 1967), and marketing managers have done their best to put the benefit derived from these investigations to work in the marketplace, with, of course, the segmenting of the cigarette market as one of the best examples (e.g. Stanton, 1978).

Yet, while it is generally agreed that the notion of market segmentation is a backbone of marketing thought, and quite effective in marketing practice, it may be useful to focus on what may be a critical aspect of segmentation that has received little attention in the literature, and which may, in fact, represent both a new way of thinking about the segmentation issue as well as a "new" segment useful for marketing efforts. This aspect concerns the idea of individuation-deindividuation as it relates to marketing theory and practice. We will, then, first selectively review the literature relating to this important concept, and will then turn to a discussion of how this topic may relate to the segmentation issue.

### Individuation-Deindividuation

Individuation was defined by Jung (1946, pg. 561) as "the development of the psychological individual as a differentiated being from the general, collective

psychology". Individuation, therefore, is a process of differentiation, having for its goal the development of the individual personality. Deindividuation, by contrast, is the process of losing one's individuality or distinctiveness, to become one with the collective psychology. In our culture, individuation in a psychological sense tends to be equated with maturity and self-actualization (Dipboye, 1977) whereas deindividuation has been described as dysfunctional for both the individual and society. Violence in urban areas (Zimbardo, 1969), the lack of creativity in large organizations (Whyte, 1956), the conventionalization of consumer tastes (Van Den Haag, 1957), the dehumanization of women (Friedan, 1963), and the alienation of large segments of society (Keniston, 1970; Kanter, 1980) are some of the problems cited as symptoms of a deindividuating culture.

As Dipboye (1977, pg. 1057) points out, however, despite the relevance of deindividuation to current social problems, the psychological and sociological literature has been guided by two different theoretical approaches.

One approach has been to view deindividuation as a loss of restraints, afforded by anonymity and other forms of depersonalization (e.g. Le Bon, 1896). Theorists adopting this perspective, which has its origins in crowd theory, view the experience of deindividuation as a positively affective event. Theorists adopting the other view predict that deindividuation arouses negative affect and serves as a stimulus for behavior that establishes the uniqueness and continuity of a person's self-conceptions (Ellison, 1947). A vast amount of research in the psychological literature has been devoted to one or another of these theoretical perspectives, and will now be briefly reviewed.

### Deindividuation and Unrestrained Behavior\*

According to Dipboye (1977, pg. 1058), "the largest portion of the social-psychological research on the topic of deindividuation consists of tests of the hypothesis that a loss of identity is the stimulus for unrestrained, impulsive, and uncontrolled behavior (Festinger, Pepitone, and Newcomb, 1952; Singer, Brush and Lublin, 1965; Zimbardo, 1969)." That is, experimental social psychologists have taken the approach of the crowd theorists (Le Bon, 1896; Tarde, 1890; McDougal, 1920), who postulated that a dissolution of individual identity occurs for individuals in a crowd and that this loss of identity acts as a stimulus for uncontrolled group behavior. Jung (1946, pg. 261) maintained, for example, that loss of identity in a crowd released the violent, primitive side of human nature as evidenced in a "frenzy of unmeasured instinct. It represents horror at the annihilation of the principle of individuation, and at the same time 'rapturous delight' at its destruction."

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\*See Dipboye (1977) for a more comprehensive review of the literature in this and the following section.



To test this notion social psychologists have, given the experimental tradition, designed deindividuating inputs to test the impact of these on such normally restrained behaviors as aggression (Watson, 1973; Baron, 1970; Zimbardo, 1969) risk taking (Pincus, 1969; Nicholson and Argyle, 1969), nonnormative reactions to social influence attempts (Duval, 1976) and other forms of antinormative behavior, such as cheating (Diener and Wallbom, 1976) or using sexually explicit language (Singer, Brush, and Lublin, 1965). The results of these experiments have generally shown that "deindividuated" individuals perform more nonconforming or antinormal behavior (for example, increased frequency of noncompliance to social influence attempts) than "individuated" individuals. Additionally, theorists in this group have shown some, though weak, support for the notion that deindividuation is pleasurable and tends to be associated with liking for the group (Dipboye, 1977).

#### Deindividuation and Identity Seeking

In contrast to the previous theoretical approach discussed, a second sees deindividuation as an unpleasant experience that motivates the individual to seek individuation (Dipboye, 1977). The origins of this approach lie in the humanistic orientation (Horney, 1950; Maslow, 1968; Fromm, 1956). Fromm (1956) stated that humans struggle between the need to escape separateness and the need for a separate identity. Fromm (1956) felt that people in our society delude themselves where necessary, into believing they are individuals, where such a need "is satisfied with regard to minor differences: the initials on the handbag or sweater, the name plate of the bank teller, the belonging to the Democratic as against the Republican party, to the Elks instead of to the Shriners, become the expression of individual differences. The advertising slogan 'it is different' shows up this pathetic need for difference, when in reality there is hardly any left."

Theorists adopting this orientation take a different view of the nonnormative, anticonforming, or seemingly uncontrollable behavior often exhibited by deindividuated individuals. In their view, such behaviors may represent an attempt on the part of the deindividuated individual to "reindividuate" himself or herself, or to gain the attention of those who refuse to recognize that individual's separate existence. In the case of aggressive behavior, for example, Milgram and Toch (1969) showed that group aggression, i.e. a riot, may be intended to dispel and not reduce anonymity. Klapp (1969, pg. 84) has noted, with respect to self-presentation, that "people are seeking audiences, trying to draw attention, rather like entertainers and celebrities. They choose styles-cosmetics, hairdoes, beards, sandals, wigs, eye patches, flamboyant costumes, much as an actor choosing a costume in a dressing room--with an eye to its impact on audiences, to catching attention with startling effect." Thus, according to those holding this view, not only do individuals seek to present themselves in a manner that establishes their uniqueness, but they also may reject feedback or other attempts to lump them into homogeneous categories (Snyder and Larson, 1972).

#### Importance of the Concept for Market Segmentation

While further integration of the conflicting theoretical orientations inherent in the deindividuation issue must be forthcoming (Dipboye, 1977), it is nonetheless possible to recognize the importance of the individuation-deindividuation issue for marketing theory and practice, particularly as relates to the concept of market segmentation. Individuation-

deindividuation may represent a new way of thinking about the segmentation issue, may point to "new" segments available for increased marketing attention, and may suggest additional refinements of previously existing segmentation strategies. Each of these will now be reviewed in turn.

#### A New Way of Thinking About Segmentation

Individuation-deindividuation theory perhaps suggests a new way of thinking about market segmentation. Market segmentation is utilized, among other reasons, because of the inherent impracticability of marketing to individual consumers. Thus, through segmentation marketers attempt to identify relatively homogeneous groups of individuals or "submarkets" which serve as the target for marketing efforts. The key here is the notion of "relatively homogeneous," and relates to the bases upon which the segmentation strategy is formed. The research base underlying individuation-deindividuation theory suggests that while consumer "groups" may be relatively homogeneous with respect to more traditionally utilized segmentation bases they may differ substantially and concurrently with respect to the rationale underlying group and product identification. While this is, in itself, not a new idea, being related to reference group theory (cf. Merton and Kitt, 1950; Stouffer, Suchman, Devinney, Star and Williams, 1940), for example, it is possible that individuation-deindividuation may help provide a rationale and a framework for more effectively considering these differences as they relate to segmentation.

#### Identification of "New" Market Segments

Individuation-deindividuation theory may point to previously undifferentiated market segments, and provide a rationale for more effectively dealing with these individuals. Recent research by Kanter (1980), for example, has identified a large segment of deindividuated, and somewhat alienated European consumers. The results of Kanter's survey, which covered 2200 respondents in England, Belgium, France, Holland, Italy, and West Germany, showed that, by often lopsided percentages, respondents in five of the six nations displayed a remarkable cynicism and alienation from positions and institutions of note. These individuals, and their counterparts in our own country and others, may represent a new opportunity or a new challenge to marketing efforts. Indeed these individuals may represent important new market segments previously untapped or largely ignored under more traditional segmentation analysis.

#### Planning More Effective Marketing Strategies

Individuation-deindividuation theory may be extremely useful in planning more effective marketing strategies. That is, efficient utilization of the findings of previous individuation-deindividuation research may prove useful in "finetuning" promotional campaigns, identification of target markets, and the like. For example, for years advertising promotions and sales appeals have utilized or capitalized on the so-called "bandwagon effect." Yet individuation-deindividuation theory may be particularly effective in helping to identify those product classes, and appeals which can most effectively feature "Bandwagon" promotions.

It is clear, for example, that (1) advertisers already utilize individuating versus more deindividuating (or group oriented, "bandwagon") appeals in their messages and (2) that some product classifications and traditional market segments are seemingly more appropriate targets for an individuated versus deindividuating

appeal. The following examples drawn from past and present advertising appeals, demonstrate both of these ideas:

TABLE 1  
SEGMENTATION OF ADVERTISING APPEALS

Product Classification	Advertising Appeal	
	Individuating	Deindividuating
Motorcycles	(Yamaha) "Don't follow anyone"	(Honda) "Follow the Leader"
Soft Drinks	(Dr. Pepper) "Be a Pepper"	(Pepsi) "The Pepsi Generation"
Automobiles	(Volkswagon) "Everybody's Playing Follow the Leader"	(Chevrolet) "Baseball, Apple Pie, and Chevrolet"
Wearing Apparel	(Jordache) "The Jordache Look"	(J.C. Penneys) "Plain-pocket Jeans"

However, it is equally apparent that advertisers in particular, and marketers, generally, have utilized these appeals in an unsystematic fashion, without the benefit of theory or adequate conceptual frameworks. Individuation-deindividuation theory may be useful in guiding the research which could further delineate these important issues.

#### Directions for Future Research

The application of individuation-deindividuation theory to market segmentation strategies suggests a number of directions for future research. Future studies might seek to determine the size and composition of various deindividuated segments of the population, as these may represent untapped market segments. Such research should also seek to identify behavioral and other dimensions of these segments. Research might be done, for example, on the differential response, if any, to deindividuating versus individuating advertising appeals for segments of variously deindividuated and individuated individuals. Future research might also probe the interaction between level of group identification, rationale and type of deindividuating inputs, and behavioral response to marketing stimuli. In this way more understanding and a gradually developing profile of what may be "new" market segments will be accomplished.

#### Conclusion

This paper has discussed the relationship of individuation-deindividuation theory to market segmentation. In particular the paper first reviewed the individuation-deindividuation literature, and then discussed how these concepts might be applied to thinking about segmentation in a new light, to identify previously untapped market segments, and to direct market segmentation strategies.

Examples of individuating and deindividuating appeals were also given and future research directions were also suggested.

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#### Abstract

Measuring firm goodwill in the private limited firm still remains a contentious issue in accounting. This paper proposes an alternative method of measuring goodwill based on the market share such firms are able to achieve through competitive marketing strategies. It gives explicit recognition to the role that marketing resources play on determining the value of a firm when considering acquisition or disposal.

#### Introduction

Determining acquisition or disposal values for private limited companies continued to occupy the attention of the accounting literature. While there is general agreement that business goodwill, the most problematic aspect of such valuation, can be measured by the present value of the firm's anticipated 'excess' earnings, observers continue to express uneasiness at existing methods of derivation.

The concern has been primarily centered on four issues associated with direct methods of valuation. First, the difficulty in determining a normal rate of return to the firm given the problem of finding representative firms, secondly, the difficulty in estimating the 'excess' earnings directly attributed to goodwill, thirdly, finding the appropriate discounting rate for these excess earnings (Paton 1936), and finally, identification of those items which have contributed to existing goodwill (Nelson 1953).

Because of these problems one finds that indirect methods of goodwill valuation are often used in preference to direct estimation. These approaches view goodwill as merely a residual or balancing item. Such methods are more likely to place emphasis on the "break-up" value of the firm rather than on its performance as a going concern (Weston and Brigham 1975). What appears then to be currently needed is a measure for goodwill which has the simplicity of appeal of the indirect approach and the precision that direct valuation methods purport to be striving for. This paper proposes an alternative way of estimating firm goodwill which has such advantages. It suggests that goodwill should be measured directly based on the existing market share the firm has.

While the value of the public company and associated goodwill can be directly assessed on the basis of existing share prices, there exists no comparative methodology for derivation of goodwill in the private firm. In the public enterprise the difference between the going concern value and the liquidating value can be said to represent the value of the organization or the accounting goodwill. On the other hand valuation of "the private limited company" is often confounded by lack of explicit recognition of the organization value, the major determinant of the firm's future success (Moon 1968).

However if the firm is perceived as a market actor with specific characteristics that are responsible for its competitive behavior there should exist a direct relationship between these factors, the

ability to earn superior earnings and its market performance. It is this relationship that this paper examines with the purpose of showing how it can be applied to measuring accounting goodwill. A number of examples are provided to demonstrate the reconstruction of goodwill from industry and firm data.

#### A Market Centered Approach

The view that goodwill is the consequence of the possession of certain economic advantages by the firm, evidencing itself in the form of superior earnings in an amount greater than can be expected for a typical firm in the industry, is generally accepted in the accounting literature (Edey, 1962).

These economic advantages may be customer lists, trademarks, trade names, brands, patents, copyrights, secret processes and formulas, licenses and favorable attitudes toward the enterprise by all of its relevant publics (Nelson, 1953). It is these competitive characteristics which determine the firm's success in the market place. Their strategic utilization is causally connected with the sales, and consequently, the earnings that the business unit derives from operating (Buzzell, Gale and Sultan, 1975).

It is this assumption that distinguishes the market centered approach from a more conservative accounting view which holds that "The mere existence of an established concern, and favorable attitudes on the part of customers, employers, and others associated therewith, does not demonstrate the existence of intangible property." (p. 4, Staub, 1945) Some accountants disagree and admit that favorable customer attitudes can and does give a push or "momentum" to goodwill, a much more enlightened perspective (Nelson, 1953).

On the basis of the above the following postulates are suggested:

- 1) Customer (or consumer) goodwill is a measure of favorable consumer attitudes to the firm's products and can be defined as their disposition to buy the company's products or services over a competitor's offerings.
- 2) Although customer goodwill is traditionally regarded as one component of the firm's goodwill (Nelson, 1953), it should be viewed as the single determinant of a firm's sales, a consequence of the resultant of the interaction of the strategic constituents of firm competitiveness (Kotler, 1980; Schoeffler, Buzzel and Heany, 1974).

#### Consumer Goodwill, Superior Sales and Market Share

A firm's sales (and consequently, earnings) are a reflection of consumer goodwill toward the firm and its products. In choosing between "equivalent" products, buyers select those which offer a greater amount of perceived benefits relevant to their needs. This link between sales and consumer goodwill is explicitly assumed and expressed in the firm's marketing strategy. As a consequence the presence of superior sales volume, and therefore superior earnings are indicative of a competitive advantage secured by the

strategic disposal of firm's resources (Farris and Buzzell, 1979).

The existence of a large market share or the ability to keep a market position does not simply "happen," rather it is a reflection of the presence of such factors as a superior product, a good location, effective pricing strategy, superior management, etc. These factors result in superior earnings for the firm. Therefore, a large market share and superior earnings are related because of the existence of the common prerequisite causal factors which simultaneously give rise to both features. The PIMS Studies provide some empirical evidence which demonstrates that market share and return on investment are highly correlated and lend empirical support to the above argument (Schoeffler, Buzzel and Heany, 1974; Fruhan, 1971).

Market shares can be used to measure consumer goodwill. Since market share is a measure of the consumers' disposition to buy the firm's product versus those of competitors, then by definition, market share is a relative measure of consumer goodwill toward the firm. Maintenance and growth in market shares are a result of consumer preferences for the firm's products (Farris and Buzzell, 1979). Goodwill on the part of the customers toward the firm will also manifest itself through increased superior sales and superior earnings. Consequently, a measure of customer goodwill such as market share is necessary in order to determine the firm's superior sales volume and superior earnings.

Two aspects of market share must however, be borne in mind. Firstly, the market share is a relative measure of goodwill (relative to others in the industry), since share is a relative figure. Secondly, market share is not a monetary estimate of goodwill, and therefore is not in a form which can be presented in a financial statement.

#### Theoretical Derivation of Goodwill

It is now necessary to proceed from a measure of goodwill in the form of market share to a monetary figure for goodwill. Consider the case of two or more established firms who have unmet production capacity.

There are three reasons for these restricting assumptions. In the case of a newly formed firm, no market share can be presumed to exist and consequently no goodwill. As sales increase, both market share and goodwill will increase as the firm's product and activities become known. More than one firm needs to exist in the industry, since a market share of 100% is a trivial case as this indicates a 'pure' monopoly situation. The consumer has no choice but to buy from a single supplier and market share can no longer be a meaningful measure of goodwill. Indeed in such cases the present value of superior earnings becomes a redundant measure, since the "normal" earnings and the actual earnings are equivalent. The final assumption is necessary in order that customers are not queued and that capacity does not come into play in limiting market shares. The existence of overcapacity allows for allocation of sales to indifferent buyers on a first-come - first-served basis.

The revenue of a firm is derived from purchases of repeat buyers and those who have no definite preference for the firm's products. It is repeat buying that is an indicator of consumer goodwill since such behavior is consistently influenced by specific benefits offered by the particular firm and its product. Those buyers represent a superior sales volume over and above the

sales expected from the stochastic behavior of indifferent buyers (Kotler, 1974; Howard, 1968).

The indifferent consumers can be said to exercise minimal specific preference for particular products. They are flexible in their requirements and buying patterns. They are equally likely to choose products of one firm as another, hence each firm would experience physical sales to the indifferent consumers in proportion to their sales capacity.

#### Mathematical Derivation of Firm Goodwill

In the discussion that follows, "P" represents the number of units sold to loyal buyers (who reflect consumer goodwill, by showing consistent preferences for one firm's product) and "I" represents the number of units sold to indifferent buyers, for the entire industry. Assume two firms, "A" and "B" exist in an industry, which sell only one product. Let "A" be the firm in question, and let "B" represent the sum of sales of all other firms in the industry. It is important that "I" and "P" refer to the industry, whereas "I<sub>A</sub>" and "P<sub>A</sub>" refer to firm "A".

A measure of consumer loyalty (or superior sales) for firm "A" is given by the ratio:

$$(1) \text{ Consumer goodwill} = \frac{P_A}{I_A + P_A}$$

This ratio will be defined as the goodwill multiplier. Here, I<sub>A</sub> represents the firm sales to indifferent customers, and P<sub>A</sub> represents the firm sales to loyal customers.

A small value for this ratio indicates that P<sub>A</sub> is small with respect to I<sub>A</sub>. Hence, most sales occur to indifferent buyers. A large value for this ratio indicates that I<sub>A</sub> is small with respect to P<sub>A</sub>. Most sales occur to loyal buyers, therefore consumer goodwill exists. This ratio is related to the market share of firm "A" (also an expression of consumer goodwill), in the following manner:

$$(2) \frac{P_A}{I_A + P_A} = \frac{P_A + I_A}{P_A + I_A + P_B + I_B} = k \times \text{Market Share}$$

Here, "k" is a factor of proportionality. Its value can be determined. It will be assumed that k = 1, for simplicity.

As the market share increases, the relative importance of the loyal buyers on sales will increase. This is reasonable. Another way of stating this is that for a given sales capacity, growth in the market share is a natural outcome of more customers actually preferring the firm's product.

For example, if

$$\frac{P_A}{I_A + P_A} = k \times \text{Market Share} = 0.5$$

Let I<sub>A</sub> + P<sub>A</sub> = 1, and therefore, I<sub>A</sub> = P<sub>A</sub> = 0.5. Now we let the market share increase to 0.51.

$$\frac{P_A}{I_A + P_A} = k \times \text{Market Share} = 0.51.$$

Let I<sub>A</sub> + P<sub>A</sub> = 1, and therefore, P<sub>A</sub> = 0.51 and I<sub>A</sub> = 0.49.

This assumption that growth in market share is accompanied by growth in consumer goodwill is embodied in equation (2).

The product of the ratio  $\frac{P_A}{I_A + P_A} \times (\text{Sales} - \text{CGS})$  gives

the earnings figure resulting from the purchases by the firm's loyal buyers. This is the superior earnings, in dollars, which exists due to such favorable factors as location, good management, pricing, quality, employee productivity, etc.<sup>1</sup> represented for an accounting period. These factors attract and retain the loyal buyer's patronage. In order to calculate goodwill as the present value of future superior earnings, it is necessary to make a projection of future sales and future market shares, as well as costs.

Estimates for I and P are obtained from market research. If the firm sales capacity is not exceeded, then a new constraint must be introduced. This constraint is that the sales to indifferent customers is in proportion to the sales capacity of the firm.<sup>2</sup>

Some Numerical Examples

Example 1 Excess Capacity

A market survey shows 90% of the buying population showed strong preferences for certain brands of widgets. Firm "A" has 10% of the market share and 5% of the industry capacity. Industry sales were 1,000,000 widgets per year, and each firm has sufficient capacity to meet its demand. Calculate the firm's goodwill, if the contribution is 20%, and the sales price is \$1.00.

Using units,  $S = I + P = 1,000$ , and  $I = 10\% \times 1,000,000$  or 100,000 units being sold to indifferent buyers.

$I_A = 5\% \times 100,000 = 5,000$  units sold by firm "A" to indifferent buyers.

$S_A = 10\% \times S = 10\% \times 1,000,000 = 100,000$  widgets.

$P_A = S_A - I_A = 95,000$  widgets. ( $P_A$  is treated as a residual, after the calculation of  $I_A$ )

Superior earnings =  $\frac{P_A}{I_A + P_A} \times (\$ \text{ Sales} - \$ \text{ CGS})$

for the year =  $\frac{95,000}{100,000} \times (100,000 - 80,000) = \$19,000$

Examples 2 and 3 present further applications of the method. Example 2 shows the effects of differences in capacity while Example 3 shows the individual effect of differences in costs of production.

<sup>1</sup>It should be emphasized that the superior earnings figure is a reflection of the firm's sales strengths and cost controls. For example, such intangibles as good relations with material suppliers or highly productive employees will act to reduce the cost of goods sold and therefore increase sales or earnings. In reality, any factor which increases sales or decreases costs is necessarily reflected in superior earnings.

<sup>2</sup>The sales to preferential buyers is not necessarily in proportion to the firm's sales capacity.

Example 2 Calculating Goodwill with Differences in Firm Capacity

Let us assume three firms A, B and C with operating production capacity of 50%, 30% and 20% of the existing and market shares of 45%, 30% and 25% respectively. Furthermore 10% of industry sales of \$1,000,000 is accounted for by indifferent buyers. The selling and production costs of the widgets are \$1.00 and \$.80 respectively.

Sales to indifferent buyers =  $10\% \times \$1,000,000 = \$100,000$

	Firm A	Firm B	Firm C
Indifferent buyers sales	\$ 50,000	\$ 30,000	\$ 20,000
Preferred buyers sales	\$400,000	\$270,000	\$230,000
Cost of goods sold	(320,000)	(216,000)	(184,000)
Superior Earnings	\$ 80,000	\$ 54,000	\$ 46,000

Example 3 Calculating Goodwill with Differences in Costs of Production

Let us assume that three widget producers A, B and C have similar production capacities, equal market shares and unit production costs of 80¢, 85¢ and 80¢ respectively. Again 10% of the industry sales of \$1,000,000 is to indifferent buyers. The selling price of a widget is \$1.00.

Sales to indifferent buyers =  $10\% \times \$1,000,000 = \$100,000$ .

	Firm A	Firm B	Firm C
Indifferent buyers sales	\$ 33,000	\$ 33,000	\$ 33,000
Preferred buyers sales	\$300,000	\$300,000	\$300,000
Cost of goods sold	(240,000)	(255,000)	(240,000)
Superior Earnings	\$ 60,000	\$ 45,000	\$60,000

It should be noted that although Firm B has the disadvantage of higher production costs, it has a positive goodwill and a market share (above that to be expected from having purely indifferent buyers).

If the production capacity of one firm in the industry is exceeded, then another firm may cater to the excess demand, and its market share increases. This also increases the goodwill of the larger firm, since it now has a capacity advantage over a competitor. This advantage is reflected in an increase in sales and therefore goodwill. This shift of buyers from one firm to another due to inadequate sales capacity is identical to its final effects to a shift of buyers due to the pricing, quality, or other changes in the components of goodwill. It is important to note that it is the indifferent buyers who are the first to shift due to temporary undercapacity. If the undercapacity is permanent, then loyal buyers may also shift their patronage. In this case, a new goodwill multiplier  $\frac{P_A}{I_A + P_A}$ , should be calculated.

Although we have considered only the single product firm, the methodology for deriving goodwill in a multi-product firm is similar. For this type of firm, one can calculate market share for each product to obtain a measure of the superior sales to loyal buyers for each product.



## Implications for Valuation of Goodwill

We must point out that there are three main difficulties in applying this method. The market must first be surveyed, and then segmented into loyal and indifferent buyers using appropriate criteria (Frank, 1968). Market shares can then be derived and measures of sales allocation between the two types of purchasers obtained. Secondly, "equivalent" products must be defined. While this method can be used in markets composed of diverse competing products, it works best for homogeneous products where the market can be more easily measured. This ability is an important consideration in view of the problems associated with determination of the relevant market (Shocker and Srinivasan, 1979; Day, Shocker and Srivastava, 1979). The measure of goodwill could be materially affected by the definition of market which is chosen. What is important is that the definition must be useful for reporting and planning purposes.

Notwithstanding the above problems, there are a number of advantages in using our new approach to goodwill valuation. This method not only measures the internally and externally created goodwill that affects sales, and therefore market share, but it also makes no distinction between the sources of such goodwill. In contrast traditional methods only recognize purchased goodwill and disregard the contribution that intangibles such as advertising, sales policy and sourcing strategy make to increasing sales. As a result the superior earnings capability of the firm is often underestimated.

This valuation technique permits goodwill to remain as an unamortized asset until there is evidence of its decline through loss of market share or sales. In contrast, current methods of amortization of goodwill tend to be arbitrary and imposed ex ante. For the firm desirous of increasing its disposable value there is a motivation to increase sales and market share, an incentive not offered by the classical method. Our measurement of goodwill realistically puts the emphasis on performance features and competitive strength evidenced by a demonstrated potential for generation of new sales.

Although the determination of future income and performance has its own imprecision, adoption of this approach focuses attention on consideration of future market shares and earnings, which are the crucial elements to look at in firm acquisition or disposal decisions. The acquired business is worth more than the sum of its net assets because of the market share and earnings to be had. Such worth is determined by its relevant publics and competitive environment, in particular, consumers (through sales) and competitors (through market share changes). This emphasis on the external environment adds a new dimension to the meaning of goodwill.

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THE CONSUMER SOCIALIZATION PROCESS IN THE CHILD-YOUTH MARKET  
AND ITS STRATEGIC IMPLICATIONS FOR RETAILERS

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Abstract

The socialization process that takes place in the child-youth market, provides a guideline for the retail marketing strategy. This article first explores the importance of this market. After this exploration, an attempt is made to identify different marketing strategies at different stages of the socialization process. The rest of the paper elaborates upon how marketing strategy for the child-youth market can be developed.

Introduction

Socialization is a broad term for the process by which an individual assimilates or learns the culture in which he is reared. It is through this process that the characteristics of his everyday life are determined (Zigler and Child 1969). Through interactions with other people and with various environmental factors, he develops his specific pattern of socially relevant behavior experience. This process can be viewed as an organized behavioral system of exchange.

The consumer socialization process is characterized by attitude formulation which includes the learning of social roles and the concomitant behavior patterns. As social creatures, individuals continually observe, learn, and preserve the norms, folkways, values, beliefs, and attributes of others in the same society. This is the initial development of knowledge, attitudes, and consumption patterns which are relevant to the individuals' functioning as consumers (Ward 1974).

It has been stated that the child learns adult behavior patterns, adult values, and anxieties through his childhood experiences. These experiences therefore influence profoundly the formation and composition of cognitive patterns and behavior in later stages of the life cycle (Gesell and Ilg 1974). During the transition from childhood to adulthood, each of the child's actions is reinforced, punished, or ignored. In the child's environment, various stimuli are associated consistently with one another (Gesell and Ilg 1974). Berelson and Steiner (1964) state that opinions, attitudes, and beliefs are "inherited" (psychologically and sociologically) from one's parents; children learn them early and that learning persists into adulthood.

This paper presents a discussion of the child-youth market's size and sales potential, followed by a review of the consumer socialization process as it relates to retailing. In the discussion, the consumer socialization process of the child is analyzed in the form of a fourstage model. Finally, the relationship and importance of the process to marketing are presented in a series of general propositional statements.

The Child-Youth Market

The child-youth market, as defined here, includes individuals from age 3 to 19. The closest breakdown of U.S. Census Bureau figures shows that in 1979, 61.371 million or 28% of the total population was contained within this age span (U.S. Dept. of Commerce 1980). Despite the declining birth rate, it has been projected

that by 1990, this segment will be 60 million strong and will drop only slightly to approximately 25% of the total population and remain there through the year 2000 (U.S. Dept. of Commerce 1977).

The importance of this young market and the consideration that it should receive from astute retailers stem from youth's significant discretionary purchasing power. According to U.S. Census Bureau figures for 1978, there were 14,966,000 people between the ages of 14 and 19 earning incomes totaling \$24.442 billion (U.S. Dept. of Commerce 1980). The median income of year-round full time workers in 1974 for males and females between the ages 14 and 19 was \$7,079 and \$5,928, respectively (U.S. Dept. of Commerce 1980).

Income figures for children aged 3 to 13 are most difficult to obtain. Income from part-time jobs, allowances, or monetary gifts provided the child market with substantial purchasing power. Some years ago a study (McNeal 1969) estimated average weekly expenditures of children to be about \$1.10. If we were to assume that this figure has gone up to \$3.20/week, in 1980 the child market would have increased approximately \$6.1 billion. Perhaps the most important aspect of this group's purchasing power is related to the influence they exert on virtually all of parents' purchases. One study indicated that approximately 15% of the time teenagers have sole influence on key family purchase decisions (Samli and Windeshausen 1965). However, information on this influential power is extremely limited; thus, the full significance of the child-youth market remains to be established.

The Socialization Process's Influence on Young Consumers

The socialization process is triggered by social expectations and exchanges which influence the behavior associated with various roles. Through the different stages of the socialization process, the individual will experience the impact of new roles (such as those adopted in adolescence) which may modify or change completely the previously learned patterns. In the process of learning these new roles, the young individual acquires various attitudes, knowledge, and values which affect his role as a consumer. Due to the influence exerted upon it by these roles, consumer behavior is viewed as a second-order consequence of more fundamental aspects of social learning (Ward 1974).

Throughout the socialization process, there is a multitude of cultural factors influencing the child's buying behavior. Seven of the more important cultural factors are the following: family, peers, marketing, outside adults, community members, teachers, and community organizations. In order to understand and appreciate the full implications of the consumer socialization process, one should analyze it from two different perspectives: the exogenous factors influencing the individual (including the seven cultural factors mentioned earlier), and the analysis of the individual himself throughout the process. The latter approach is utilized in this paper.

## The Four Stages of Consumer Socialization

During the childhood and adolescence stages, individuals develop a set of expectations about products and services -- "a standard package" that they will own as adults (Reisman and Roseborough 1955). It is reasonable to assert that this standard package also includes retail establishments (Samli and Windeshausen 1964). Children begin to learn the consumer role through actual "participation, observation, and training" (McNeal 1969). Additionally, they commence learning values and attitudes which prepare them for the role of adult consumer. There are four stages in the individual's life cycle which are considered to be significant from the retailers' point of view (Gordon 1971). These are discussed in this paper (Figure 1) and are presented in descending order according to their degree of influence in the consumer socialization process. Since there is little evidence that early childhood and infancy stages are important for the retailing sector, the Oedipal period is the first life cycle stage presented.

Oedipal Period. This is the period during which the consumer socialization process commences (Alexander 1969). Parents are the key sources of values and information which are transmitted through instruction and selective reinforcement of special responses (Breckenridge and Vincent 1964). The child also begins to interact with other children; hence, it becomes important for him to obtain acceptance by his peers (Garrison, Kingston and Bernard 1967).

Later childhood. The child makes his initial venture into the world of school in this phase, and he experiences the uncertainty and instability resulting from the behavioral expectations of others. The focal point in the child's social orientation begins shifting from his family to the peer group (Bossard and Bell 1969). As the child's involvement in the peer group's activities increases, he develops a growing preference for association with this group. Other behavioral characteristics manifested in this period are rapid development of social consciousness; major interest in group activities; increasing susceptibility to social approval and disapproval; and a growing revolt against adult domination (Bossard and Bell 1969). During this period, the teacher plays a key role in conveying societal demands and expectations (Garrison, Kingston and Bernard 1967). In addition, early in this stage television begins to play a major role in the socialization process.

Early Adolescence. This is an important period in which various manifestations of antisocial behavior appear with a definite backward trend in social adjustments (Bossard and Bell 1969). The youth joins own-sex peer groups and learns to cope with the continuing stress upon valued personal qualities--ethnicity, social class, and gender role attributes such as sexual attractiveness (Kagan, Coles and Coles 1972). His choice of group membership expands to involve family, peer crowd or cliques, "official" school groups, and the wider world of social class, socioeconomic status, and ethnic subcultures. He gains autonomy from the formal parental authority structure while gaining emotional peer support through conformity to the "youth culture norms." Buying behavior develops accordingly, as shopping with peers increases and shopping with parents decreases. Radio and TV have an even more influential impact on the developing consumer role than they did at the previous stage.

Later Adolescence. This period is the stage in which the youth completes his transition from childhood to maturity. The struggle for autonomy is facilitated by high school, college, and work-setting sub-cultures. During this period, the youth's discretionary income increases substantially. Additionally, with peers continuing to exert strong influence on youth's buying behavior, a proclivity toward fads becomes more evident. The majority of purchases are made independently of parents, consequently, with the youth cultivating his own specific brand and store preference.

### Available Forms of Purchase Influence for Young Consumers

As a consumer the young individual has four forms of influence for securing desired products: Personal purchase by the child, direct requests at home, direct requests in the store, and passive dictation (Wells 1965). The first three are direct attempts and are rather self-explanatory. Passive dictation can be explained as the child's way of influencing the parent's purchase of products. By simply observing the child's consumption habits in terms of what he consumes willingly and what he resists, the parents can ascertain easily the child's preferences (Ward 1974).

In each stage of the socialization process, the young individual will select from his repertoire the form of influence or the combination of influence approaches which he perceives as having the highest probability of maximizing his satisfaction. Figure 1 lists the form(s) of influence utilized in the different stages. These are presented in descending order according to their frequency and effectiveness in securing desired products.

### Strategic Consideration for the Retailer

Figure 2 illustrates the logical flow of the decision-making process by a retail establishment as directed toward the child-youth market. Three key points are particularly critical in the diagram. First, the retailer must decide whether present or future emphasis is more important in dealing with the child-youth market. Second, the age categories of the child-youth market must be determined. Finally, the target for the advertising and other promotional activities must be selected. Within the context of this flowchart, there are numerous strategies available to the retailer. Despite the fact that the retailing sector has multifarious marketing practices available for developing a marketing strategy, the majority of retailers have failed to produce and implement a complete and clearly delineated strategy.

The following discussion is not meant to be thorough or exhaustive; rather, it presents certain key (although over-simplified) strategies which can be used by the retailer at different stages in the socialization process.

- Offer merchandise for children but appeal to parents and other adults for purchase. (Adult appeal)
- Offer merchandise for children, but focus appeal primarily on parents and other adults for purchase; however, try to attract the children to the store to encourage overt request of parents in store by the children. (Adult appeal II)

FIGURE 1  
FOUR STAGES OF THE CONSUMER SOCIALIZATION PROCESS

<u>Life Cycle Stage</u> <sup>1</sup>	<u>Size (1973)</u> <sup>2</sup>	<u>Most Significant Others</u> <sup>3</sup>	<u>Form(s) of Influence Utilized</u> <sup>4</sup>	<u>Retail Strategy</u>
I. <u>Oedipal Period</u> (3-5 years)	9.665 million	Mother Father Television Same Sex Peers Siblings	Direct Request at Home Direct Request in Store Passive Dictation Personal Purchase	Adult Appeal
II. <u>Later Childhood</u> (6-11 years)	20.429 million	Parents Television Same Sex Peers Teachers	Direct Request at Home Direct Request in Store Personal Purchase Passive Dictation	Adult Appeal II Child-Adult Appeal
III. <u>Early Adolescence</u> (12-15 years)	14.948 million	Television, Radio Parents Same Sex Peers Opposite Sex Peers Teachers	Direct Request at Home Personal Purchase Passive Dictation Direct Request in Store	Youth Appeal
IV. <u>Later Adolescence</u> (16-19 years)	16.326 million	Same Sex Peers Opposite Sex Television, Radio Parents Teachers Loved One Wife or Husband	Personal Purchase Passive Dictation Direct Request in Store Direct Request at Home	Youth Appeal II

<sup>1</sup>G. Gordon, "Socialization Across the Life-Cycle: A Stage Developmental Model," Department of Social Relations, Harvard University, 1969, and "Role and Value Development Across the Life-Cycle," in a symposium on role theory, ed. by J. Jackson, Sociological Studies IV, Role (London: Cambridge University Press, 1971).

<sup>2</sup>"Population Profile of the United States: 1979," Current Population Reports, Series p. 20, No. 350, U.S. Dept. of Commerce, Bureau of the Census, May 1980; where exact age group statistics were not available, they were estimated through interpolation.

<sup>3</sup>G. Gordon, most significant others are listed in descending order in terms of their degree of influence in the consumer socialization process.

<sup>4</sup>W. Wells, "Communicating with Children," Journal of Advertising Research, V (June 1965), pp. 2-14; forms of influence are listed in descending order in terms of their frequency and effectiveness in securing desired products.

-Offer merchandise for children and appeal to adults as well as the children. Make sure that displays and the layout in the store are persuasive enough for direct requests at home and direct requests in store. (Child-adult appeal)

-Offer merchandise for the youth market, appealing primarily to the youth. Make sure that the displays and store layout are adequate, and also that the merchandise mix is appropriate for peer interaction and opinion leaders' approval. Put special emphasis on TV and radio advertising geared directly to the youth market. (Youth appeal)

-Offer merchandise for the youth market with appeal to the youth market exclusively. Assure adequate merchandise mix, displays, and store layout; in addition, develop special customer services such as special credit card, specially trained salespeople, liberal return policy, celebrity guests, and the like -- all geared to the youth. In other words, make sure that the "atmospherics" are adequate. Put special emphasis on TV and radio advertising directed specifically to the youth market. (Youth appeal II)

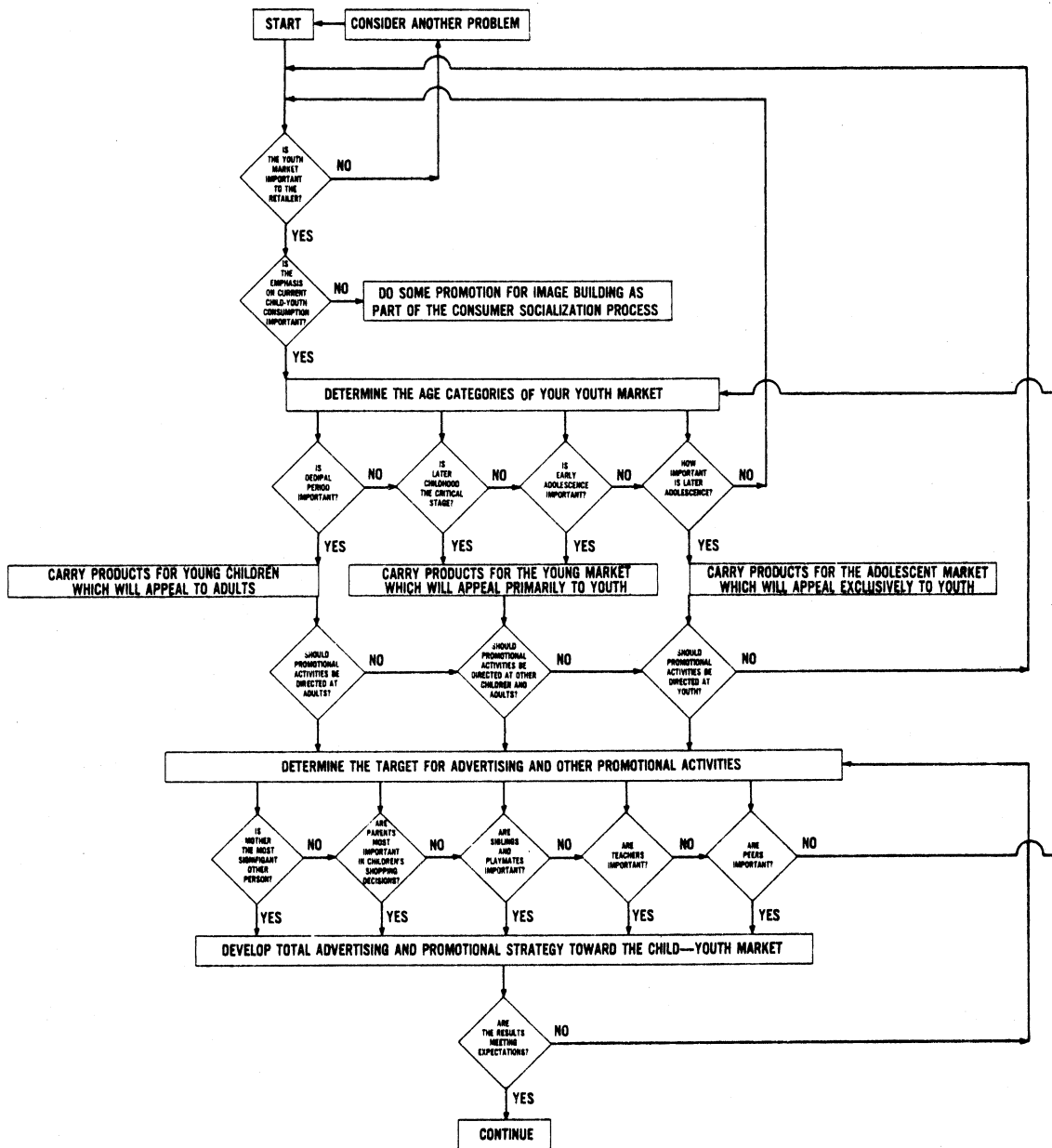
In **Figure 1** a general suggestion is made for the strategies appropriate in each stage of the socialization process. There are numerous other strategies plus variations of the ones discussed above. It is important for the retailer to ascertain the specific characteristics of his target market(s) in order to develop a precise marketing strategy for successfully reaching the child-youth market.

**Figure 3** illustrates how each marketing mix component for the child-youth market could be utilized in each of these five strategies. If, for instance, the retailer wants to use merchandise mix for children to be a focal aspect of its child-youth market strategy, that retailer will either use adult appeal or adult appeal II.

Although the marketing mix components in different strategies, the **Figure** illustrates what can be done to plan the child-youth marketing strategy. The retail establishment, by developing its own sequel to **Figure 3**, could plan effectively as to taking advantage of the opportunities in this important market.

FIGURE 2

THE LOGICAL FLOW OF RETAILING STRATEGY TOWARD THE CHILD-YOUTH MARKET



Examples of Special Marketing Practices

A small sample of the numerous activities currently being used in retailing is presented below.

1. Kroger has been distributing cookie credit cards to children in the elementary schools which can be presented at the bakery department when the child is accompanied by an adult. (Adult appeal II)
2. Robin of "Batman and Robin" spends every Saturday in different shopping centers promoting merchandise to the youth. (Adult appeal and Adult appeal II)
3. Stix Baer and Fuller in St. Louis formerly sponsored the televised Saturday dances for young people on their premises. (Adult appeal and Youth appeal)
4. Ronald McDonald of McDonald Hamburgers visits grand openings of McDonald Restaurants to attract youth. (Adult appeal II and Youth appeal)
5. Santa Claus not only visits toy departments of department stores but frequently stays in the store throughout the Christmas shopping season. (Child-Adult appeal)
6. Dairy Queen has a Dennis the Menace Dairy Queen Birthday Club which offers children free food on their birthdays. (Adult appeal II)
7. Sam Goody's raffles off tickets to major rock concerts in order to attract youth into its stores to purchase records and audio equipment. (Youth appeal)



FIGURE 1  
ELEMENTS OF THE FOUR CHILD-YOUTH MARKETING STRATEGIES  
GEARED TO THE FOUR STAGES OF THE SOCIALIZATION PROCESS

Marketing Mix Components	Marketing Strategies				
	I	II	III	IV	V
Merchandise Mix for Children	+	+	-	-	-
Merchandise Mix for the Youth Market	-	-	+	+	+
Point of Purchase Displays for Children	+	+	-	-	-
Point of Purchase Displays for the Youth	-	-	+	+	+
Point of Purchase Displays for Adults	+	+	+	-	-
Store Layout for Children	+	+	-	-	-
Store Layout for the Youth	-	-	+	+	+
Store Layout for Adults	+	+	-	-	-
Promotion to Children	-	+	-	-	-
Promotion to the Youth	-	-	+	+	+
Promotion to Adults	+	+	-	-	-
Customer Services for Children	+	+	-	-	-
Customer Services for the Youth	-	-	+	+	+
Customer Services for Adults	+	+	-	-	-
Atmospherics for Children	+	+	-	-	-
Atmospherics for the Youth	-	-	+	+	+
Atmospherics for Adults	+	+	-	-	-

I=adult appeal, II=adult appeal II, III=child-adult appeal, IV=youth appeal, V=youth appeal II. (+) implies emphasizing, (-) implies de-emphasizing, and (+-) implies a combination.

8. Country Legend in Southwest Virginia offers a complete line of denim jeans and other related jeans products with the entire store geared to attract the college town's young population. (Youth appeal II)

#### Concluding Comments

For retailers, awareness and responsiveness to the concept of adult life cycles have long been recognized as critical for assuring successful operations. Equally critical but historically neglected are the retailer's awareness and responsiveness to the consumer socialization process during the "child-youth life cycle."

Unlike the early stages of this process, as socialization approaches completion, parental influence in the youth's purchase decisions becomes less pronounced. Accompanying this declining parental influence is an increasing conformity by the youth to the "youth culture" norms as his consumer role continues to expand. Consequently, because of these changes occurring to the young population, it is imperative that the retailer choose a specific marketing strategy which treats this market as a viable and important segment. In developing such a strategy, it is of extreme importance that the retailer understands the "most significant others" who not only influence the attitudes and values of the youth, but who can serve also as opinion leaders. Because of this dual role, the opinion leaders for each stage of the consumer socialization process can change with changes in the "most significant others" as illustrated in Figure 1. Consequently, the changing "most significant others" must be observed carefully by the retailer so that he can take full advantage of the two-step flow of communication.

The following general statements may hold importance for future research and/or for retail strategy formulation.

The four stages of the consumer socialization process are distinct and detectable in the child-youth market.

At each stage of the process, different roles are attributed to different people, thus forming the most important outside influencing factors in the attitude and behavior of consumer trainees.

Retail merchandising and promotion geared directly to the child-youth market are more productive than relying solely on the discretion of parents and other adults.

An awareness, understanding, and utilization of the consumer socialization process are critical for effective retailing to the child-youth market.

In order to cultivate successfully the child-youth market, retailers must implement one or more specific retail strategies which incorporate knowledge of the consumer socialization process.

In the two-step flow of communication, the "most significant others" serve in the opinion leader roles.

Both large and small retail institutions have special interest in the child-youth market, not only as a currently viable segment, but also as a major portion of the future market. Consequently, future research of the consumer socialization process and its relationship to retailing is needed in order to provide guidelines for future retailing activities.

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## SEX ROLES IN ADVERTISING: ADDITIONAL EVIDENCE

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### Abstract

The present study used a feminine role orientation scale as a measure of 151 women's beliefs on their role in society. Women were then grouped according to traditional and liberal values and their attitudes towards advertising and sex roles in advertising were analyzed. The results proved contrary to an earlier study by Duker and Tucker.

### Introduction

In a recent research study by Duker and Tucker (1977), they have contributed to the growing inventory of research focusing on role portrayals in advertisements. Unlike the vast majority of prior investigations (Belkaoui and Belkaoui, 1976; Courtney and Lockeretz, 1971; Sexton and Haberman, 1974; Venkatesan and Losco, 1975; and Wagner and Banos, 1973) which were content analyses of advertisements and, therefore, dependent on the researchers' subjective evaluations, these authors studied the preferences of women toward role portrayals in actual advertisements. Duker and Tucker's research tested the hypothesis that women who are strongly oriented toward the women's liberation movement will not differ from those with weak orientations in their perceptions of advertisements showing women in various roles. Accordingly, the thrust of their article was to determine the relationship between profeminist predispositions and the perceptions of women's role portrayals in ads.

With some modifications, Duker and Tucker basically employed an approach used earlier by Wortzel and Frisbie, (1974). This earlier research required respondents to "construct" ads from portfolios consisting of illustrations of various products and of women in different roles, and to respond to attitudinal questions for purposes of categorizing subjects as pro or con towards the women's liberation movement. Duker and Tucker took the Wortzel-Frisbie methodology a stage further by including a personality trait, independence of judgment, as a moderator variable for profeminist attitudes. Rather than "construct" ads, their sample of 104 college women (ages 18-21) were shown ads portraying a woman as: mother, sex object, glamour girl, housewife, working mother, modern woman, and professional. A questionnaire elicited the respondents' structured and nonstructured responses to each of the ads; these reactions being then interpreted as profeminist or not. Thereafter, the subjects completed a profeminist attitudinal scale (consisting of 22 statements on feminist issues), measuring predispositions to the women's liberation movement, and also took the Barron Test of Independence (Barron, 1963) comprising 20 forced choice items. Based on this data, individuals were classified as profeminists or traditionalists, and differences in their perceptions of women's role portrayals in the ads were analyzed.

Statistical results led to acceptance of the null hypothesis that there was no significant differences between profeminist and traditionalist women with respect to their evaluations of women's role portrayals in ads. The authors note that related research (Epstein and Bronzaft, 1975; Orcutt, 1975) reinforce their conclu-

sions and that the findings, therefore, "obviate the necessity for channeling different advertisements into different media to accommodate what otherwise might be perceived as differently motivated consumers for the same product" (Duker and Tucker, 1977). It should be noted, however, that these conclusions, as well as those of the quoted supportive research (Epstein and Bronzaft, 1975; Orcutt, 1975), are based on college populations. Results from a sample of women consumers from a general population in a large metropolitan area would provide either additional support or different insights to feminine role orientation and sex role portrayals in advertisements issue. These findings are presented in this paper.

### The Study

In the present study, 300 women consumers were contacted by telephone and asked to participate in an opinion survey regarding advertising practices. Of these, 151 completed a self administered questionnaire. This instrument contained a seven item, attitudes toward advertising scale, a seventeen item, attitudes toward sex role portrayal scale, a ten item, feminine role orientation scale, and various demographic questions. The attitudes toward advertising scale was used as an overall measure of the respondent's attitude toward contemporary advertising and was designed specifically for this study. The scale measuring sex role portrayals was adapted from one used previously by Lundstrom and Sciglimpaglia (1977). Developed by Arnott (1972), the feminine role orientation scale measures a woman's predisposition toward women's role in society. It has been used elsewhere to study the relationship between a wife's role orientation and her family's purchasing decisions (Green and Cunningham, 1975).

Similar to Duker and Tucker (1977), who used opinions concerning feminist issues to classify their subjects as profeminists, traditionalists or neutrals, the present study used the feminine role orientation scale as a measure of each woman's beliefs concerning the "proper place" for females in society. In this respect, the underlying cognitive domain which was used to classify respondents is somewhat broader and more inclusive than profeminist beliefs. Based on the role orientation scores, two extreme groups, labeled "modern" (n = 40) and "traditional" (n = 36) women, were identified as representing the approximate upper and lower quartiles. As seen in Table 1, the modern group was found to be younger, better educated, more likely to be employed, and from a slightly lower economic strata.

Attitudes toward advertising in general and towards sex role portrayals in advertising were compared between these two groups. With respect to their attitudes toward advertising, the two groups did not differ significantly on the summated attitude mean scores. Concerning sex role portrayals, however, the opinions expressed by the two groups differed greatly. The summated attitudes toward role portrayals mean scores showed highly significant differences ( $t = 5.21$ , 74 d.f.,  $p < 0.001$ ). The modern women was more critical of role portrayal practices than the traditional. In addition, the two groups differed on ten of the seventeen indi-

vidual items which made up the scale. These items, together with the mean values for all women in the sample and for these two groups, are shown in Table 2. While not significantly more critical of advertising in general than her traditional counterpart, the modern woman appears to harbor much more strident beliefs concerning role portrayals of both men and women. The modern woman more critically expresses the belief that neither men nor women are accurately depicted by advertising; that women are shown as dependent on men; and, that women are shown as not doing important things or making important decisions. Compared to the traditional woman, the modern group is more sensitive to the portrayal of women in advertising and generally finds the results more personally offensive.

#### Conclusions

The studies of Wortzel and Frisbie (1974) and of Duker and Tucker (1977) appear to indicate that the holding of profeminist attitudes by women has little effect on the evaluation of roles portrayed by women in print advertisements. The research reported here, however, offers different and divergent evidence. Modern women, defined by their attitudes toward the role of women in society, were not found to be more critical of advertising in a general sense than were traditional women. Their views on sex role portrayals were found to be greatly divergent, however, with the modern women more critical than those holding traditional views. These results indicate that women with different views regarding women's place in society vary markedly in their attitudes toward advertising's portrayal of the social and occupational roles of both men and women.

The implications for these two different findings are widely divergent for marketing management and the task of matching the advertising to the views of the marketplace. If the proposition that women's orientations do not influence their perceptions of role portrayals in advertising, then the advertiser can rest easy that any form of advertising - sexist or not - may be employed without fear of backlash. However, if the second finding is true and role orientation is a moderator variable in fomenting criticism of sexist advertising, then there is increasing task complexity for the marketer. The complexity arises in that there are two audiences that must be courted and, hopefully, with minimal overlap between the two. For the modern woman (and potential critic), the advertising must reflect nonsexist advertising with actors portraying a variety of "modern" roles, i.e., career woman at the office, husband assisting in household chores, etc. However, the "traditional" woman may not identify with these changing roles and consequently believe that the product or service is not intended for her use. In the latter case, the marketer is faced with an unintended demarketing by the ad. Thus the marketer may wish to develop two series of ads for each audience and carefully place them in mediums where there is a higher proportion of one segment of a particular viewer or reader. Once again, there is a potential problem that the ad will be seen by the inappropriate audience and hence rejected.

Until such time as this state of uncertainty can be resolved, the marketer will face the problem of should I, or should I not develop one or more types of advertisements. Additionally, one would have to ask what are the correct media in which to place these ads to meet the target audience requirements (orientations). Faced with this dilemma and given the conflicting research results presented in this paper, the marketer can only use his or her best guess until further research is undertaken on a larger scale and across diverse populations to answer these questions.

TABLE 1  
SAMPLE COMPOSITION: ALL WOMEN, MODERN AND TRADITIONAL WOMEN

Demographic Characteristic	All Women (n = 131)	Modern Women (n = 40)	Traditional Women (n = 36)
Age (mean years)	30.0	28.4	34.4
Education (mean years)	14.5	14.8	13.7
Employment (percent employed full or part-time)	74.8	80.0	55.5
Household Income (mean in thousands)	20.65	21.1	22.2

TABLE 2  
SIGNIFICANT ATTITUDINAL DIFFERENCES BETWEEN MODERN AND TRADITIONAL WOMEN ( $P \leq 0.05$ )

	All Women X ( )	Modern Women X	Traditional Women X
Advertisements suggest that a woman's place is in the home.	4.73 (1.72)	5.20	4.17
Ads which I see (don't) show women as they really are.*	5.39 (1.63)	5.95	4.78
Advertisements suggest that women are fundamentally dependent on men.	4.50 (1.67)	4.88	3.69
Ads which I see (don't) show men as they really are.*	5.21 (1.44)	5.58	4.58
Ads which I see (don't) accurately portray women in most of their daily activities.*	5.05 (1.52)	5.43	4.47
Advertisements (don't) suggest that women make important decisions.*	5.10 (1.50)	5.68	4.39
Ads which I see (don't) accurately portray men in most of their daily activities.*	4.86 (1.53)	5.03	4.22
Advertisements suggest that women don't do important things.	4.62 (1.51)	5.20	3.94
I'm more sensitive to the portrayal of women in advertising than I used to be.	4.90 (1.41)	5.85	3.86
I find the portrayal of women in advertising to be offensive.	4.42 (1.58)	5.30	3.58
Sumated role portrayal attitudes	4.77 (1.11)	5.35	4.14

(\*) Reversed items.

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Because of the continually shifting population, spiraling costs of land and construction, the increasing number of planned shopping centers and changing urban conditions, much emphasis is being placed on the selection of sites for retail stores. This trend toward more importance being placed on retail location has lead many entrepreneurs, chain store executives, and researchers to seek more sophisticated site selection techniques. A number of different approaches have been taken in attempts to quantitatively solve the retail site selection problem. Most of the more common approaches are blessed with strengths and plagued with weaknesses in the methodological processes. For example, the maximum likelihood model, developed by David Huff,<sup>1</sup> has the strength of ease of calculations when only a few sites are being considered at one time. However, Huff's approach has a major disadvantage of considering only two variables, the size of the building being considered and the average driving time needed for the mass of the target market to reach the location under study.<sup>2</sup> Obviously, there has to be more than two variables that are of importance for selecting retail sites. One seldom used alternative approach which considers more variables, multiple regression analysis, is the basis of this study. The use of regression analysis offers the possibility of incorporating a nearly limitless number of variables that are pertinent to the company and the specific site, while still maintaining ease of calculation (after a regression equation has been developed).

As stated before, the use of regression analysis in this manner is not new, but neither has it been heavily researched. One study using regression analysis attempted to forecast the sales associated with sites based on the following variables: gross selling area; rent expenses; distance to the nearest parking area; the accessibility to the store; and the urban growth rate.<sup>3</sup> A second study coupled regression analysis with the Automatic Interaction Detector (A.I.D.), a multivariate technique.<sup>4</sup> The object of this approach was to establish a retrospective way of evaluating the economic health of existing stores. The significant variables found in this study were the following: the quantity of parking spaced; the selling area in square feet of the building; the population of the catchment area; and the number of competitors in the region. Other factors considered were: social class of the catchment area; age characteristics; car ownership; size of household; availability of public transportation; exterior appearance; frontage length of the store; the amount of displayed stock; the appearance of the interior; staff salaries; and number of checkouts. One of the conclusions of this study was that traffic pattern variables were better predictors of sales than were demographic variables around the site.

#### Objectives of the Study

Since regression analysis has been previously used to predict the sales associated with a retail site, it is obvious that some people consider that it is a viable site selection tool. However, no one has reported the effectiveness of regression when used in this manner. Thus, one primary objective of this study is the reporting of the ability of regression analysis to closely predict the sales of an already existing store based on site specific variables that are deemed to be important factors on the sales of the store.

The findings from the Heald study are contrary to many traditional marketing beliefs.<sup>5</sup> Most marketing scholars would at least like to believe that demographic variables are of at least equal importance to traffic pattern variables as far as the prediction of sales are concerned. Thus, the second and final objective of the study is to reexamine one of Heald's conclusions under the belief that demographic variables will be as good for predicting as traffic pattern variables.

#### Methodology

Sales data for stores were gathered from two chains. One of the chains was in the fast-food restaurant business and agreed to furnish data from two geographical regions of their operations. The first of the two regions for this chain was represented by 42 stores with from one to four years of sales data for each store giving a total of 108 data points in the region. The second region was represented by 17 stores with multiple years of sales data for each store producing a total of 45 data points. The second chain dealt in jewelry and furnished one year of sales data for 92 different stores.

Information relative to traffic patterns, amount of competition, and accessibility of each of the stores was furnished by the chains and found in the United States Census of Population. Tables 1 and 2 contain listings of the variables that were used for the two chains, along with the simple correlation that existed between the variable and sales. All of the variables for chain one were used in subsequent analysis. Two variables, advertising budget and the executive rating of the store manager, were left out of the subsequent analysis for chain two. These two variables were left out due to their post hoc relationship to the selection of the retail site.

Factor analysis was used as a preliminary screening procedure before the data was submitted to stepwise regression programs.<sup>6</sup> Aside from using the original variables mentioned above, all possible interactions of the original variables (interactions were obtained by multiplying two original variables) and all of the squared and cubed values for each variable were included in the pool of available variables.<sup>7</sup> Multicollinearity was controlled through setting the tolerance option on the regression programs at .3. This procedure prohibits two variables that are highly correlated from both entering the regression equation and is one of the acceptable methods of handling the multicollinearity problem.<sup>8</sup> Control of multicollinearity assures that the regression coefficients will not be as likely to fluctuate significantly from sample to sample.

The first objective of this study, the evaluation of regression analysis as a means to closely predict retail sales, was examined through the use of the percentage distribution of the amount each predicted sales figure missed the actual sales figure for each store. It was assumed that tighter distributions of missed sales were preferable. Of course, all kinds of managerial decisions on levels of conservatism (i.e. missing the actual sales figure on the high side) could be entered at this point, however these researchers



simply, as stated before, observed the tightness of the distribution.

The second objective of this study, the examination of whether or not demographic data are better predictors of sales for a store than are traffic pattern data, was determined in a different manner. In this case, the objective was examined by comparing the correlation coefficient generated by using all of the demographic data in a regression model to a similar coefficient generated by using all of the traffic pattern variables in another regression model. Both of the correlation coefficients were tested for departure from a correlation coefficient of zero using an anova design.

The second objective was judged through observations of the differences that were found between the multiple correlation coefficients associated with two equations developed from data related to the first chain. The first of the two equations included all of the original variables except demographic variables. While, the second equation included all variables except traffic pattern variables. Analysis of variance was then used twice to compare each equation's correlation coefficient to a similar coefficient for an equation that contained all of the variables used for that chain (a so called full-model equation).

#### Findings

**Table 3** contains the regression equation that was developed for region one of the first chain. As can be noted, twelve variables ended up being included in this equation. Of the twelve, all but one were significant where  $\alpha = .10$ . **Table 4** contains summary material related to the above mentioned equation. The multiple R was equal to .81384. While, the equation explained approximately two-thirds of the variance that existed between the sales figures for the stores. The standard error for this regression equation was \$33,618.77, which reflects the needed multiplication by a thousand as suggested in **table 3**. **Table 5** contains the percentage distribution of the sales estimates (i.e. the amount that the estimate missed the actual sales divided by the actual sales). This equation tended to overestimate about as often as it underestimated. Nearly three-fourths of the stores had estimates that were within percent of their actual sales, while the average percentage missed for all of the data points was only 14.3.

**Table 6** contains the regression equation that was developed for region two of the first chain. As can be noted from this table, only six variables were found to be of enough significance to be included in the equation. **Table 7** contains a summary of the findings associated with this equation. The multiple R associated with this equation was .86215. While the equation found explained nearly three-fourths of the variance existing between the sales figures of the stores in this region. **Table 8** contains the percentage distribution of the sales estimates for this equation. Over one-half of all of the stores had estimates that were within fifteen percent of the actual sales. The average amount that the sales estimates missed the actual sales was 13.6 percent.

**Table 9** contains the regression equation developed for the second chain. Only five variables were included in this equation, but all were significant where  $\alpha = .01$ . **Table 10** contains summary material related to the above equation. The multiple correlation coefficient for this equation was .7799. While the equation explained about sixty-four percent of the variance that existed between the sales of the stores. **Table 11** contains the

percentage distribution of the sales estimates. Over a third of the stores had estimates generated that were within fifteen percent of the actual sales. However, a similar amount of stores had estimates that were between twenty to fifty percent different than the actual sales.

**Table 12** contains the comparison between a regression equation that contained all of the original variables from chain one and an equation that contained all of the variables except those that were related to traffic patterns. The semi-partial correlation coefficient (the difference between the full-model coefficient and the partial model coefficient) was .0367. Thus, the amount of variance explained uniquely by traffic pattern variables was less than one percent. An analysis-of-variance test run as comparison between the two equations in this table was insignificant where  $\alpha = .10$ . Thus, traffic pattern variables were found to produce an insignificant contribution to the predictive power of a regression equation used in the prescribed manner of this study.

**Table 13** illustrates analysis that is similar to **table 12** with the exception being that demographic variables are the subject of comparison. The demographic variables are the subject of comparison. The demographic variables produced a semi-partial correlation coefficient of .0175. Meaning that demographic variables accounted for less than one percent of the variance in sales between stores. An analysis of variance test between the full-model equation and the equation that excluded demographic data was found to produce insignificant results where  $\alpha = .01$ . Thus, demographic data variables were found to produce insignificant predictive help to the regression equation for this chain.

#### Discussion

The results from the three regression equations were not exactly earthshattering. However, predictions that are on the average within fifteen percent of the actual sales for a potential site could be an extremely useful tool in the evaluation of potential sites. The results from the last chain's equation are disappointing to say the least. Predictions that average missing the actual figures by nearly 24 percent are nothing to brag about. Yet, these predictions may still be better than similar predictions from other quantitative techniques as no one has taken the time to empirically report their predictive ability either. Part of the failure associated with the last equation can probably be explained by the lack of more than one year of sales data for each of the stores in the sample. Any given store is likely to vary by 10 or 15 percent in sales from year to year. Having more than one year of sales data for each store would have helped reduce the inherent instability that exists between yearly sales. This could vary well have reduced the average percentage that the predicted values missed the actual sales.

Contrary to the findings of Heald, this study can not conclude that demographic variables are worse predictors than are traffic pattern variables. Actually neither of the categories of variables were found to have much predictive power. While, the absolute impact of traffic pattern variables was slightly higher than the impact associated with the demographic variables, the differences is certainly not significant. Obviously, one can not be too conclusive about any statement on such a small sample (if one item actually is a sample). However, Heald's statement was even more universal, as it had no empirical evidence to support it.



The use of regression analysis in this manner produced some interesting features as a sidelight. For example, companies could tell what variables correlate most closely with sales as evidenced in tables 1 and 2. It is interesting to note that for chain one (table 1) the variables had different correlational values between the two regions that were included in the study. This could also be interesting information for any chain wanting to improve their site selection techniques. To add more support to regional differences among the same chain, the regression equations developed for chain one varied between the two regions (tables 3 and 6). Thus, regression analysis could be more sensitive to operating differences that exist between two regions of the same chain, while other quantitative approaches may never consider the existence of differences.

Footnotes

- [ 1 ] David L. Huff, "A Programmed Solution for Approximating an Optimum Retail Location," Land Economics, Vol. 42 (August 1966), p. 293.
- [ 2 ] See for example: Philip Kotler, Marketing Decision Making: A Model Building Approach, (New York: Holt Rinehart and Winston, 1971), p. 293; and Thomas A. Stanley and Murphy A. Sewall, "Image Inputs to a Probabilistic Model: Predicting Retail Potential," Journal of Marketing, Vol. 40 (July 1976), pp. 48-53.
- [ 3 ] Ross L. Davies, Marketing Geography, (Corbridge, Namberland, England: Retailing and Planning Associates, 1976), p. 248.
- [ 4 ] G.I. Heald, "The Application of the Automatic Interaction Detector Programme and Multiple Regression Techniques to the Assessment of Store Performance and Site Selection," Operations Research Quarterly, Vol. 23 (1972), pp. 445-457.
- [ 5 ] Ibid, pp. 445-457.
- [ 6 ] See for example: Jacob Cohen and Patricia Cohen, Applied Multiple Regression/Correlation Analysis for the Behavioral Sciences, (Hillsdale, New Jersey: Lawrence Erlbaum Associates, Publisher, 1975); Joseph F. Hair, Jr., Ralph E. Anderson, Ronald L. Tatham, and Bernie J. Grabrowsky, Multivariate Data Analysis, (Tulsa, Oklahoma: PPC Books, 1979), p. 219; John Weter and William Wasserman, Applied Linear Statistical Models, (Homewood, Illinois: Richards D. Irwin, Inc., 1974); and Thomas R. Sharpe and Mickey C. Smith, "The Substitution Controversy: Attitudes of Pharmacists Toward Repeal of Antisubstitution Laws," Drugs in Health Care, Vol. 3 (Winter 1976), pp. 218-234.
- [ 7 ] Cohen and Cohen, pp. 291-339.

TABLE 5

PERCENTAGE DISTRIBUTION OF SALES ESTIMATES

Limits within which the percentage falls	Number over-estimated	Number under-estimated	Total
0-5	11	14	25
5-10	14	13	27
10-15	11	10	21
15-20	9	8	17
20-30	5	6	11
30-50	3	3	6
over 50	0	1	1
Totals	53	55	108

Average Percentage = 14.3

TABLE 1

THE VARIABLES USED AND THEIR SIMPLE CORRELATIONS WITH SALES FOR CHAIN ONE

Variable	Correlation	Correlation
1. Number of square feet at the site	-.180	-.053
2. Number of parking spaces	-.097	-.030
3. Whether or not the store is free-standing	.229	.000
4. Whether or not the store is on a corner	-.273	-.508
5. The number of people working in the area	.204	-.197
6. Whether or not there is a residential backup around the store	.000	.000
7. Whether or not the traffic is homeward bound	-.161	.514
8. The average age of the people in the area	-.111	-.142
9. The median income of the people in the area	-.199	.598
10. The number of people living within a mile and a half	.161	.148
11. The number of people living within three miles	.031	.101
12. The traffic count in front of the store	.115	.027
13. The speed limit in front of the store	.177	.326
14. The percentage of the traffic that is for commuter purposes	-.044	.118
15. The number of pizza stores in the area	.177	.326
16. The number of restaurants in the area	.210	-.267
17. The value of the land	-.108	.580
18. Whether or not the store sells beer	.270	.000

TABLE 2

THE VARIABLES USED AND THEIR SIMPLE CORRELATIONS WITH SALES FOR CHAIN TWO

Variable	Correlation
1. Whether or not the store is in a mall	.495
2. The number of square feet in the shopping center	.575
3. The number of parking spaces around the center	.581
4. The number of stores in the center	.441
5. The number of anchor stores in the center	.533
6. The number of grocery stores in the center.	-.322
7. The number of national chain store anchors in the center	.409
8. The number of other jewelry stores in the center	.439
9. The age of the center	-.050
10. The type of the center	.521
11. The nonworker to worker ratio in the area	.013
12. The percentage of females over 16 in the labor force	.036
13. The percentage of the labor force employed in manufacturing	-.172
14. The percentage of the labor force made up by white collar workers	.210
15. The population in the area	.224
16. The median income in the area	.049
17. The average number of years of school completed	.069
18. The percentage of families with annual incomes over \$15,000	.032
19. The percentage of males 18 to 24 in the labor force	-.006
20. The advertising budget of the store	.936
21. The executive rating of the management of the store	.625

TABLE 3

## REGRESSION EQUATION FOR REGION ONE OF CHAIN ONE

(Note: The predicted value needs to be multiplied by 1000)

Variable	B	Std. Error of B	F-ratio
V1	3.877409	1.32569	8.555***
V2	-.001157	.00081	14.312***
V3	103.1981	19.56192	27.830***
V4	.069143	.00777	79.180***
V5	-.486243	.22181	4.806***
V6	$-1.06 \times 10^{-12}$	$.1 \times 10^{-13}$	4.972***
V7	-24.35437	5.39869	20.351***
V8	-.6796	$.20 \times 10^{-10}$	70.126***
V9	-.768076	.00045	2.788*
V10	-.046101	.00754	37.427***
V11	$-.3408 \times 10^{-7}$	$.101 \times 10^{-7}$	20.508***
V12	$-1.053 \times 10^{-8}$	$.215 \times 10^{-8}$	12.914***
Constant	-5.536911		

\*Significant:  $\alpha = .10$   
 \*\*Significant:  $\alpha = .05$   
 \*\*\*Significant:  $\alpha = .01$

Where V1 is the number of parking spaces on the site  
 V2 is the square feet taken by the lot  
 V3 is whether or not the store is free-standing  
 V4 is the number of people working within a mile and a half  
 V5 is the number of people working within a mile and a half  
 V6 is the cubed value of the traffic count past the store  
 V7 is whether or not the traffic past the store is homeward bound multiplied by the number of other restaurants in the area  
 V8 is the cubed value of the number of people working in the area  
 V9 is the square feet taken by the lot multiplied by whether the store is on a corner lot  
 V10 is whether or not the store is on a corner multiplied by the number of people working in the area  
 V11 is the number of people living within three miles multiplied by the traffic count in front of the store  
 V12 is the number of people living within three miles multiplied by the value of the site

TABLE 4

## SUMMARY TABLE FOR REGION ONE OF CHAIN ONE

Multiple  $R_p$  = .81384  
 Multiple  $R^2$  = .66234  
 Standard Error = 33618.77

Analysis of Variance	Df	Sum of Squares	Mean Squares	F
Regression	12	21.0617.69559	17551.47463	15.52923*
Residual	95	107371.05999	1130.22168	

\*Significant:  $\alpha = .01$ 

TABLE 6

## REGRESSION EQUATION FOR REGION TWO OF CHAIN ONE

(Note: the predicted value needs to be multiplied by 1000)

Variable	B	Std. Error of B	F
V1	$.3798 \times 10^{-7}$	$.306 \times 10^{-8}$	3.141*
V2	$-.7256 \times 10^{-10}$	$.827 \times 10^{-11}$	19.048***
V3	$-.1036 \times 10^{-6}$	.00003	10.324***
V4	$.1270 \times 10^{-6}$	$.153 \times 10^{-7}$	14.224***
V5	$.1695 \times 10^{-6}$	$.189 \times 10^{-7}$	5.203**
V6	25.75410	13.63722	3.566*
Constant	109.7062		

\*Significant:  $\alpha = .10$   
 \*\*Significant:  $\alpha = .05$   
 \*\*\*Significant:  $\alpha = .01$

Where V1 is the median income of the people working in the area multiplied by the value of the land  
 V2 is the cubed value of the number of people working in the area  
 V3 is the cubed value of the number of stores selling pizza in the area  
 V4 is the number of square feet the lot consumes multiplied by the number of people living within a mile and a half  
 V5 is the number of parking spaces around the store multiplied by the value of the land  
 V6 is whether or not the traffic by the store is homeward bound

TABLE 13

## ANALYSIS OF VARIANCE ON DEMOGRAPHIC VARIABLES

Equation	Degrees of Freedom	R	Residual	F
FULL MODEL	6	.3333	331159.35	0.59
DEMOGRAPHIC VARIABLES EXCLUDED	134	.3158	339854.06	
			.0175	

TABLE 7

## SUMMARY TABLE FOR REGION TWO OF CHAIN ONE

Multiple  $R_p$  = .86215  
 Multiple  $R^2$  = .74330  
 Standard Error = 31980.42

Analysis of Variance	Df	Sum of Squares	Mean Squares	F
Regression	6	112464.53777	18744.08963	18.33866*
Residual	38	38840.09196	1022.10768	

\*Significant:  $\alpha = .01$ 

TABLE 8

## PERCENTAGE DISTRIBUTION OF SALES ESTIMATES

Limits within which the percentage falls	Number over-estimated	Number under-estimated	Total
0-5	4	6	10
5-10	7	4	11
10-15	3	5	8
15-20	3	3	6
20-30	3	3	6
30-50	1	2	3
over 50	0	1	1
Totals	21	24	45

Average percentage = 13.6

TABLE 9

## REGRESSION EQUATION FOR CHAIN TWO

Variable	B	Std. Error of B	F-ratio
V1	2356.452	352.11279	44.7872*
V2	1.188	.23430	25.7021*
V3	-30.025	12.69734	5.5916*
V4	-7.664	2.69734	8.0729*
V5	.002	.00073	5.8277*
Constant	-8009.797		

\*Significant:  $\alpha = .01$ 

Where V1 is the rating of the store manager  
 V2 is the number of parking spaces around the center  
 V3 is the number of stores in the shopping center  
 V4 is the proportion of the females over 16 in the community's labor force  
 V5 is the population of the community

TABLE 10

## SUMMARY TABLE FOR CHAIN TWO

Multiple  $R_p$  = .7799  
 Multiple  $R^2$  = .6082  
 Standard Error = 2394.3013

Analysis of Variance	Df	Sum of Squares	Mean Squares	F
Regression	5	765300992.00	153060192.00	26.730*
Residual	86	493010432.00	5732679.00	

\*Significant:  $\alpha = .01$ 

TABLE 11

## PERCENTAGE DISTRIBUTION OF SALES ESTIMATES

Limits within which the percentage falls	Number over-estimated	Number under-estimated	Total
0-5	7	6	13
5-10	5	8	13
10-15	4	6	10
15-20	6	3	9
20-30	8	6	14
30-50	17	12	19
over 50	3	1	4
Totals	50	42	92

Average Percentage = 23.7

TABLE 12

## ANALYSIS OF VARIANCE ON TRAFFIC PATTERNS

Equation	Degrees of Freedom	R	Residual	F
FULL MODEL	6	.3333	331159.35	1.23
TRAFFIC PATTERN VARIABLES EXCLUDED	134	.2965	349403.12	
			18243.77	

AN EMPIRICAL EXAMINATION OF THE INFLUENCE OF  
JOB CHARACTERISTICS ON SALESPERSON MOTIVATION

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Abstract

Do job characteristics produce significant influence on salesperson motivation? This issue has been examined in this article by focussing on the relationships between perceived job characteristics and intrinsic and extrinsic dimensions of motivation. Hypotheses are generated on the basis of information available from organizational psychology and tested using data gathered from a population of industrial salespersons. Finally, implications of these findings are discussed from a managerial perspective.

Conceptualization of Salesperson Motivation

In this study, Vroom's expectancy theory (Vroom 1964) has been used to conceptualize salesperson motivation. According to this theory, motivation construct is defined on the basis of two familiar concepts: expectancy and valence. Expectancy is the subjective probability of an individual salesperson that his behavior will lead to the desired performance goals, and valence is the importance of these performance goals to him. Vroom (1964) argued that expectancy and valence combine multiplicatively to form motivation and that the algebraic sum of the products of valence of all performance goals and expectancies should be used to determine motivation. Accordingly,

$$\text{Motivation} = \text{Expectancy} \times \text{Valence of performance goals} \quad (1)$$

The valence component is further broken down in terms of instrumentality and the valence of outcomes. Instrumentality is one's subjective probability that performance will result in the attainment of desired outcomes and the term valence refers to the importance of these outcomes to the individual.

Therefore,

$$\text{Valence of performance goals} = \sum (\text{Instrumentality} \times \text{Valence of Outcomes}) \quad (2)$$

Combining equations (1) and (2), we obtain the following:

$$\text{Motivation} = \text{Expectancy} \times \sum (\text{Instrumentality} \times \text{Valence of Outcomes}) \quad (3)$$

Algebraically, this can be shown in the following manner:

$$M = f [E_j \times \sum_{k=1}^n (V_k \times I_{jk})] \quad (4)$$

Where:

- M = the salesperson's motivation
- j = the performance level
- k = the outcome as a result of the performance level j
- n = total number of outcomes
- V<sub>k</sub> = the valence of outcome k

- I<sub>jk</sub> = the instrumentality of the performance level j required for outcome k
- E<sub>j</sub> = The individual salesperson's subjective belief (expectancy) that his or her effort will lead to the performance level j.

The Nature of Basic Relationships Between Job Characteristics and Motivation

According to a number of viewpoints in psychological literature, it is maintained that individuals' cognitions of expectancy and instrumentality are in part influenced by their perceived situations of job characteristics (Campbell et al. 1970; James et al. 1977; Schneider 1975). It is usually assumed that perceived job characteristics are included in the making up of a cognitive map which in turn serves as the major source of situational information for the formulation of expectancies and instrumentalities and hence motivation. In other words, expectancies and instrumentalities are viewed as an additional stage of information processing that was primarily cognitive in nature.

Functional Job Characteristics and Salesperson Motivation

Functional job characteristics are critical in determining whether salespersons believe that good performance on the job leads to feelings of accomplishment, growth, and self-esteem. That is, whether individuals will find their jobs to be intrinsically motivating. These job characteristics are also important because they serve as a motive arousal function for satisfying higher order needs and because they influence belief concerning which rewards will be seen to stem from good job performance. Functional job characteristics such as autonomy, and job challenge and variety (Table 1) are most likely to arouse motives like accomplishment, interesting work, generate among salespersons who have these motives aroused, the belief (instrumentality) that successful performance will result in outcomes that involve feelings of accomplishment and interesting work.

TABLE 1  
DESCRIPTION OF FUNCTIONAL JOB CHARACTERISTICS

Job Challenge and Variety:	The extent to which a job gives the individual a chance to use his skills and abilities, and calls for the individual to engage in a wide range of behaviors.
Job Autonomy:	The ability of a person in a given job to determine the nature of the tasks or problems facing him and to arrive at a course of action.
Job Importance:	The extent to which the person feels his job makes a meaningful contribution and is important to the organization.

Lawler (1969) has argued that in order to make an employee feel that good performance will lead to intrinsic rewards, the job must be perceived by the individual as requiring him to use abilities that he values. Only if an individual feels that his abilities are being tested by a job, can feelings of accomplishment and growth be expected to result from good performance. This implies, therefore, that functional job characteristics such as autonomy, challenge and variety, and job importance can significantly enhance salespersons' intrinsic instrumentality and intrinsic motivation. Some laboratory studies (e.g., Alper 1946; French 1955) have in fact shown when people are given tasks they see as testing their abilities, greater motivation does appear.

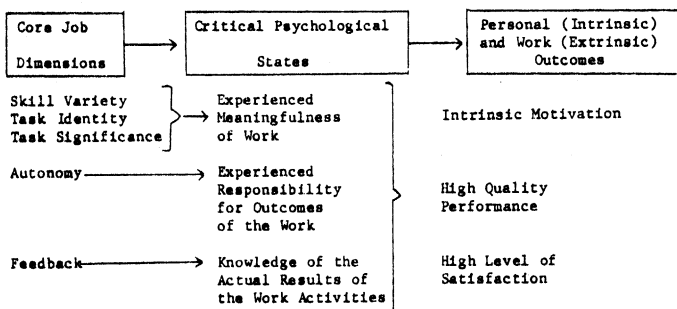
Studies in organizational psychology have maintained that for a high level of motivation, an individual must feel he has a high degree of self-control over setting his own goals and over defining these goals. Argyris (1964) contends, only if this condition exists will people experience "psychological success" as a result of good job performance. Accordingly, job autonomy should help in inducing the salesperson's intrinsic instrumentality and motivation.

In recent job enrichment studies, it is argued that job variety, skill requirements, and autonomy will enhance salespersons' satisfaction along with intrinsic instrumentality and motivation as they will strongly believe that good performance will result in feeling of accomplishment and interesting work. Further support to this argument is provided in a theory proposed by Hackman and Lawler (1971) according to which five "core" job dimensions determine the "motivating potential" of an individual. According to the basic postulation of this theory, motivating potential of an individual is a function of five core job dimensions. Specifically:

$$\text{Motivating Potential Score (MPS)} = \frac{\text{Skill Variety} + \text{Task Identity} + \text{Task Significance}}{3} \times (\text{Autonomy}) \times (\text{Feedback}) - (4)$$

The theory further contends that these dimensions affect some critical psychological states of an individual (Figure 1). These states are: (1) Experienced meaningfulness of work: the degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile, (2) Experienced responsibility for work outcomes: the degree to which the employee feels personally accountable and responsible for the

FIGURE 1  
A THEORETICAL MODEL RELATING THE CORE JOB DIMENSIONS, THE CRITICAL PSYCHOLOGICAL STATES, AND INTRINSIC AND EXTRINSIC OUTCOMES



results of work he or she does, and (3) Knowledge of results; the degree to which the employee knows and understands, on a continuous basis, how effectively he or she is performing the job. These three psychological states are then shown to influence positively an individual's intrinsic motivation, performance, and level of satisfaction. A later empirical study by Hackman and Oldham (1975) has shown positive support to the above theoretical postulations. The above conceptualization leads to the following hypotheses:

Hypothesis 1: The higher the Job Challenge and Variety, the higher will be a salesperson's intrinsic motivation and aggregate motivation.

Hypothesis 2: The greater the Job Autonomy of a salesperson over his or her job, the greater will be his/her intrinsic motivation and aggregate motivation.

Hypothesis 3: The higher the perceived Job Importance of a salesperson, the greater will be his or her intrinsic motivation.

#### Relationships Between Dysfunctional Job Characteristics and Salesperson's Motivation

Several theoretical and empirical studies suggest negative relationships between dysfunctional job characteristics such as role ambiguity and task conflict (See Table 4 for definition) and employees motivation.

TABLE 2  
DESCRIPTION OF DYSFUNCTIONAL JOB CHARACTERISTICS

Role Ambiguity:	The extent to which a task is unclear in its demands, criteria, or relationships with other tasks.
Task Conflict:	The presence of pressures for conflicting or mutually exclusive behaviors.
Conflicting Authority:	The presence of a situation where a subordinate may be required to satisfy conflicting demands on various people over him.

It is argued that individuals in organizations are continually exposed to a number of expectations from their work climate that may affect perceptions of their organizational roles (Szilagyi 1977). A theory of role dynamics was proposed by Kahn et al. (1964) which focused on the development of organizational stress as a consequence of conflicting, incompatible, and ambiguous expectations that are derived from the work environment. Two major types of role stress - role conflict and role ambiguity were identified. It was argued that when the roles expected of an individual are inconsistent, the individual will experience a state of role conflict which will lead to dissatisfaction, lower performance, and a lower motivation level. In the sales management context, it is likely that such an ambiguous and conflicting role climate will lower their beliefs that an effort will result in good performance and good performance will lead to the attainment of desired outcomes. In other words, increasing role ambiguity and task conflict will decrease salespersons' instrumentality and expectancy and hence their motivation level. Recent empirical research has supported the above arguments. For example, James et al. (1977) collected data on managerial employees of a large health care company, which showed significant negative relationships between



job pressure and conflict and employees' instrumentality and motivation. Similarly, Rizzo, House, and Lirtzman (1970) found strong negative relationships between role ambiguity and job satisfaction. In a later study, House and Rizzo (1972) concluded that as compared to role conflict, role ambiguity was more strongly related to job satisfaction.

In another study, Jorgenson, Dunnette, and Pritchard (1973) found that under conditions when performance - reward contingencies were clearly identified (i.e., an unambiguous climate) performance improved remarkably as compared to when performance - reward contingencies were not clearly specified (i.e., an ambiguous climate). It was also shown that when contingencies (pay in this example) were clearly specified, effort-outcome probabilities (expectancy and instrumentality) improved significantly as compared to when contingencies were not specified. These findings further support arguments of negative relationships between ambiguous climate and an individual's expectancy and instrumentality.

It has been suggested that perceived conflict between subunits of an organization, and conflicting authority may also negatively affect individual's expectancies and instrumentalities (James et al. 1977). When goals and policies of one subsystem (e.g., department) are in conflict with those of other subsystem/s in the same organization, and if these subsystems are to determine the rewards of employees, they would feel less likely that their efforts would result in obtaining desired rewards. Consequently, both expectancy and instrumentality would decline. Such conflicts will have negative influence on both intrinsic and extrinsic instrumentality. This is because individuals, under such conflicting climate, will not only feel less enthusiastic about receiving extrinsic rewards but will also believe that hard work and good performance may not lead to such intrinsic outcomes as feeling of accomplishment, respect from supervisors etc.

The following hypotheses regarding the relationships between dysfunctional job characteristics and VIE components of salesperson motivation are presented on the basis of the above discussion:

- Hypothesis 4: The higher the job related Role Ambiguity, the lower will be the salesperson's intrinsic motivation and aggregate motivation.
- Hypothesis 5: The greater the Task Conflict perceived by a salesperson, the lower will be his/her intrinsic motivation, extrinsic motivation, and aggregate motivation.
- Hypothesis 6: The greater the Conflicting Authority of a salesperson, the lower will be his/her extrinsic motivation and the aggregate motivation.

## Methodology

### Sample and Research Setting

A medium size insurance company located in the mid-western United States provided the research setting. The company employed 180 full time salespersons. In the first stage, the questionnaire was pretested on 10% of the sales population. Inputs from the General Sales Manager and the Training Director were also sought to prepare a list of salient job outcomes and regarding possible modifications in the questionnaire. A final questionnaire was then prepared in the second stage and

was mailed to 165 salespersons. In all, 116 salespersons returned questionnaires. Twelve questionnaires were eliminated due to incomplete and unusable responses. This resulted in a final sample size of 104 (57%) of the total salesperson population.

### Data Collection Instruments

Two instruments to measure job characteristics and salesperson motivation were used. A questionnaire developed by Jones et al. (1977) was used to measure both functional and dysfunctional job characteristics. Each of the variable composites consisted of a number of Likert type items on which salespersons' responses were to be measured. The scores on all items corresponding to each composite were aggregated together to get a composite score. This scale has demonstrated sufficient predictive validity and internal consistent reliability (James et al. 1977; Jones et al. 1977).

Three measures were developed to measure expectancy, valence, and instrumentality components of motivation.

Expectancy. This measure is theorized as unidimensional. That is, it is treated as a probability with values ranging from .00 to 1.00 (Mitchell 1974; Vroom 1964). Two items were used to measure E in the hope of obtaining a more reliable measure than could be obtained by using only one item. These two items were in the chances in ten format and asked salespersons to indicate the probability (chances in ten) regarding the following two statements.

If you worked hard it will lead to high productivity.

If you worked hard it will lead to good job performance.

The sum of these two items constituted the expectancy measure.

Instrumentality. Like expectancy items, items of instrumentality were also phrased in terms of subjective probabilities. Respondents were asked to estimate the chances in ten that a "good job performance" would lead to attainment of job outcomes.

Valence. Pretesting the questionnaire and personal interviews with the General Sales Manager and the Training Supervisor were conducted to obtain a list of salient job outcomes. Of these, 8 outcomes represented intrinsic outcomes and 6 others represented extrinsic outcomes. Measures of valence for each outcome were obtained through a five-point Likert scale ranging from "very desirable" to "very undesirable."

## Analysis and Results

### Multicollinearity

Intercorrelations among variables were examined by constructing a pairwise correlation matrix including all predictor variables (Table 3). Correlation coefficients among predictor variables are of relatively small magnitude. Overall, the pairwise correlation matrix indicates that there is little multicollinearity among predictor variables.

### Results

Pearson product moment correlations between job characteristics and intrinsic and extrinsic motivation are shown in Table 4. All functional job characteristics were shown to produce a relatively profound impact on intrinsic motivation as compared to extrinsic motivation. All corresponding hypotheses are thus supported.

TABLE 3  
PAIRWISE CORRELATION MATRIX FOR CRITERION VARIABLES

Variables	Symbols	CV	JA	JI	RA	TC	CA
Challenge and Variety	CV	1.00					
Job Autonomy	JA	.13	1.00				
Job Importance	JI	.10	.15	1.00			
Role Ambiguity	RA	-.02	-.13	-.08	1.00		
Task Conflict	TC	-.07	-.09	-.04	.01	1.00	
Conflicting Authority	CA	-.01	.00	-.05	.12	.23*	1.00

\*  $p < .05$

TABLE 4  
PEARSON PRODUCT MOMENT CORRELATIONS BETWEEN JOB CHARACTERISTICS AND INTRINSIC AND EXTRINSIC MOTIVATION

Job Characteristics	Intrinsic Motivation	Extrinsic Motivation	Aggregate Motivation
<b>Functional Job Characteristics</b>			
1. Job Challenge and Variety	.25**	.22*	.08
2. Job Autonomy	.33***	.18*	.18*
3. Job Importance	.30***	.16	.14
<b>Dysfunctional Job Characteristics</b>			
4. Role Ambiguity	-.03	-.06	-.06
5. Task Conflict	-.34***	-.32***	-.28**
6. Conflicting Authority	-.34***	-.23**	-.27**

n = 104  
\*  $p < .05$   
\*\*  $p < .01$   
\*\*\*  $p < .001$

Variables challenge and variety and job importance did not significantly influence aggregate motivation. This indicates that although functional job characteristics play an important role in influencing intrinsic motivation of salespersons, they are insufficient to enhance aggregate motivation. Sales managers should, therefore, use other means at their disposal to induce extrinsic motivation and salespersons' aggregate motivation.

Correlation coefficients between dysfunctional job characteristics and motivation also produced encouraging results. Except role ambiguity, all other dysfunctional characteristics were shown to produce strong negative influence on intrinsic motivation. Likewise, except role ambiguity, all other job characteristics showed strong negative relationships with extrinsic motivation. Same dysfunctional characteristics were also shown to produce significant negative influence on aggregate motivation. Role ambiguity did not produce significant variance on any of the motivation constructs thus not supporting the corresponding hypothesis.

The results of this study are very encouraging as most of the hypothesized relationships between job characteristics and salesperson motivation are supported. Overall, results indicate that job characteristics are more influential in affecting intrinsic as compared to extrinsic motivation. This has an important implication for sales executives who mainly rely on the use of extrinsic rewards (e.g., pay, financial incentives, and promotion) to influence extrinsic motivation and presume that intrinsic motivation is internally mediated and organization has very little control over it. Job characteristics are controllable from the organization's point of view, hence they can be designed to induce salespersons' intrinsic motivation.

Findings of this study are particularly important as they suggest a number of immediately useful implications for practice. First, in addition to using extrinsic rewards to influence extrinsic motivation, job characteristics should be properly controlled to induce the intrinsic component of salesperson motivation. Then, on a frequent basis, attitude surveys should be conducted among salespersons to measure their perceptions of job characteristics and intrinsic and extrinsic motivation. Indices of both job characteristics and motivational dimensions may then be developed for the entire salesforce. This would enable the comparison of existing levels of job characteristics dimensions and intrinsic and extrinsic motivation against ideal indices. Sales managers should then take appropriate steps to redesign job characteristics (e.g., make job more challenging, give more autonomy, provide more time and resources to reduce overload) for positive inducement of salesperson motivation.

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## LICENSING: A MARKETING BONANZA?

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### Abstract

Licensing, usually thought to be almost the exclusive province of very large, if not multinational, firms, has been found to be otherwise. The subject appears to be of considerable interest to smaller firms. The financial aspects of that interest suggest that marketers have in licensing a potential goldmine.

### Background

Since 1804 the United States has traded abroad (Wilkins, 1970). This trade has taken the forms of exporting (and importing), ownership abroad, and licensing. These three forms embrace the range of commercial possibilities. This paper addresses what we believe are some hitherto unrecognized and lucrative aspects of licensing.

Abundant literature deals with exporting. Why not? If we expect to pay OPEC's bill, we need as much foreign exchange as we can generate. Our exports reached almost \$200 billion during the past 12 months, according to the Department of Commerce and its Survey of Current Business. Not without reason has exporting been called the fastest growing segment of our economy. An activity of this dimension generates a vast body of relevant literature. Not far behind is the literature dealing with ownership abroad (or investment, if we may use these words interchangeably). This is understandable, since U.S. direct investment abroad--subsidiaries, joint ventures, mergers, acquisitions--apparently totalled \$149 billion by 1979.\*

Licensing by contrast has been the literary dwarf of the Big Three. It has enjoyed neither the extent nor the depth of coverage of the other two. Licensing can include manufacture, use, sale, patents, processes, skills, know-how, trade secrets, trademarks, copyrights, good will, and so on (Townsend, 1980). Here we define it as simply a contract to use some intellectual property like a patent.\*\* Despite that limitation we are able to estimate U.S. licensing revenues today at almost \$10 billion, hardly a shabby figure, but one admittedly overshadowed by other foreign trade numbers. Tanaka (Tanaka, 1979) quotes a UNIDO estimate that worldwide technology transfers were \$11 billion in 1975. The U.S. share was some 55 to 60 percent of the total. If the dollar growth in technology transfer continues, the 1975 figure could rise to \$40-44 billion by 1985. Our estimate is extrapolated from these figures. The numerical

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\*Seymour J. Rubin, "Developments in the Law and Institutions of International Operations," American Journal of International Law (July 1974), p. 475, puts the ratio of foreign to domestic investment in the period 1950-1970 at 7:5, and our total is deduced therefrom.

\*\*A patent itself is, of course, physical, and may cover processes, implements, products, improvements, and compositions of matter (Townsend, 1980). Also see Fugate, 1973.

disparities, the seeming complexity of the subject, and the apparent lack of appreciable physical tangibility of a license may have significantly affected the overall attention paid licensing in the literature.

This is not to say that licensing has not been subjected to literary scrutiny, since that would not be true. However, one looks in vain for any extensive treatment of the subject. Texts seem generally to fall into the "how to" category. One exception (Telesio, 1979) focuses on the why's of licensing and many of the policy implications that derive therefrom. Journal articles appear to suffer the same deficiency, although a few extol the virtues of licensing and do allude to some of its pitfalls. Legal journals reflect the plethora of intellectual challenge licensing has for lawyers, but there one stops. Having scoured these articles, one comes away frustrated.

It is easy to conclude from the abundance of antitrust cases involving licensing that the process is one peculiar to very large firms, if not to multinationals alone. To conclude that is even more frustrating, though, when one is confronted with the fact that smaller companies tend to license more frequently than do larger companies. One prime source (Rhodes, 1974) notes that during the period 1961-1973 companies of under \$50 million in sales contributed 1,218 licensing activities of the 2,542 total recorded. No comparable figures exist today, but the information is useful for comparative purposes. We took \$50 million as a "small" company, since other companies had sales volumes ranging from \$50 million to more than \$1 billion. If popular concept consigns licensing to the very large companies, how does that pair up with the fact that smaller companies are far more innovative than large companies are, as is consistently claimed by the Department of Commerce?

Who does license? What is licensed? Does a firm have to be of a certain size, or is there a certain sales figure that makes one decide to license? Is there a cutoff point of some kind below which one cannot or dare not license? Can one profile a licensor? Some authors (Yanzito and Cavusgil, 1979) believe that successful exporters (our italics) can be profiled, but we are dubious that this can be done with licensors. If licensing can be lucrative and offers such obvious advantages over exporting and ownership, why isn't licensing more widespread? We reasoned that it was not widespread, because if it were, we would read more and hear more about it than we do. We had many questions but few answers. Our very ignorance became a challenge. We suspected there was something out there, but what?

### Methodology

As a conjunctive service to the Kansas Department of Economic Development, we surveyed all Kansas exporters of record, omitting only those that were merely plants for larger corporations. For instance, any licensing by Parker-Hannefin would be done by the corporation proper, not by its local assembly plant. Our ignorance suggested that reasonable survey objectives would be to determine the current extent of licensing

activity and the degree of interest in licensing among Kansas exporters. We wondered what factors helped or hindered licensing; in which areas of the world our exporters licensed; how they started licensing; how profitable licensing was or could be; what future plans licensors had; what could be done to remove perceived obstacles to licensing; and so on. We designed a one-page questionnaire, franked and addressed on the back, which required only checkmarks in response to most of the short questions. Exporters were not required to identify themselves, and we declared we would make no attempt to identify anyone. We guaranteed anonymity even if identity was disclosed. This apparently rang a bell with many, because a surprising number identified themselves in order to request a copy of our findings, rather than request findings by separate letter. A cover letter detailed our belief in the importance of the survey to Kansas firms. To increase response, we sent a printed reminder postcard three days after the questionnaire.

#### Mailing

Our mailing totalled 388 firms, the entire frame, not a sample. We received 141 returns, for a 36% response rate. However, since our mailing and our returns showed almost identical profiles of product SIC groups and size of firms, we consider the returns fairly representative of all the frame of exporters.

Licensors provided 15% of the returns, nonlicensors 85%. We had expected a split of wide dimensions, but the percentage of licensors was higher than we had anticipated. Contrary to popular opinion, fully a third of the exports from the great Wheat State of Kansas are manufactured goods. Most licensors had been licensing for more than five years. Licensors were almost evenly divided between those who initiated licensing and those who were solicited, a fact we found quite significant (more about this later). Licensing incomes per exporter ranged up to \$1.2 million and totalled an estimated \$6.8 million.

#### Results

Licensors and nonlicensors showed very different profiles of annual sales, significant at the 5% level. Licensor returns were largest in our largest sales group, over \$5 million, while nonlicensors ranged downward from that. Dependence on firm size, measured by numbers of employees, was even more pronounced, significant at the 1% level. Licensors reported more employees than did nonlicensors. At this writing we can only speculate why licensing tends to be associated with larger size and larger sales. We did find no significant difference between the two groups with respect to product SIC groups. Reported classifications ranged from 20 through 39, and both groups reported 35, "Machinery Except Electrical", far more frequently than other SIC designations. We began to think that we had learned something. We felt confident that we knew more at the working level than had been reported in the literature available to us.

The nonlicensors startled us. In fact, we ought to dedicate this paper to them. About 54% of them indicated either that they would be licensing by 1985 or that their decision could go either way, causing us to regard this large group as potential licensors. Of those who answered the question, 29% evinced an interest in a licensing seminar, and 22% wanted to meet with an active licensor. The more information we obtained, the more important our subject seemed to us.

What really excited our interest were the replies that

gave the main obstacles that kept exporters from licensing. Only a quarter reported no interest, product not suitable, etc. Of those who did not yet license, 31% said they needed to learn more about licensing. Ah, ha! There were 12% who stated that they needed to make more contacts that could lead to licensing, and 28% needed to expand their domestic markets (or, at any rate, thought they needed to), and 8% felt a need to increase firm size or assets. Was there any value in removing obstacles, if possible?

We decided some excitement was in order when we realized that an average potential licensing income from among the "potential licensors" (the 54% of the nonlicensors noted above) was some \$183,000. For Kansas exporters generally then, taking 85% of the 388 firms as an estimate of the nonlicensors and estimating 50% would license, we saw a potential for licensing income among Kansas exporters of some \$30 million. That got our attention. The figure seems reasonable. U.S. licensing income is about 5% of exporting income, and the same appears to hold true here.

#### Conclusions and Implications

We put it all together and concluded that, while there is significant and profitable licensing activity among Kansas exporters, in nonlicensors there is the potential for even greater income. This potential is accompanied by an avowed interest in licensing. Most significant of all is the obvious and crying need for information about licensing.

If nonlicensors want to learn more about licensing, who is to teach them? Certainly the legal professionals--licensing attorneys--will not, since they prefer to deal with consummate licensors. The business professions are unaware of licensing. In the academic world, selling seems within the purview of marketing, and this is selling at its best, to an interested and confident audience. We see the need for basic information in the form of seminars, one on one meetings, booklets, and contacts as a natural function for marketers. Certainly that responsibility cannot logically be placed elsewhere.

If nothing else, the need for information is underlined by the 32% who stated that the need to expand their domestic markets had kept them out of licensing. That is no barrier at all, except one of misinformation. Licensing in foreign markets has no relationship to the firm's domestic market, since a contract for the use of a patent is hardly conditioned on domestic sales. Neither is licensing conditioned on firm size or assets, as another 8% believed. The thinking of both groups apparently reflects the popular belief that only large--or larger--firms can license. That is simply not true, and merely points up the need for education. If more argument is needed, our licensors supplied that: those who initiated licensing were equipped with knowledge, and those who were launched into licensing when they were solicited by someone wanting to license might have sought licensing actively had they possessed the knowledge. Those planning to expand into new areas certainly need information.

Nothing succeeds like success. The Department of Commerce continually bemoans the sluggishness of export activity among small firms. Certainly, not all are capable of exporting, and among those that are, the perceived barriers to exporting--capital outlays, tariff and nontariff barriers, after-sales service, an inability to satisfy a questionable foreign market--

may simply be overwhelming. Licensing avoids such unpleasantnesses. Moreover, licenses are not subject to nationalization or expropriation. With this in mind, as more firms learn about licensing, nonexporting firms are bound to recognize licensing as an attractive way to trade abroad.

The evangelists for licensing have to come from the ranks of the marketers, for there is no other feasible supply. Our state alone has a calculated potential of \$30 million in licensing income, and we are gearing to meet that demand. Our people would say, "\$30 million ain't hay, Brother!" and we agree. It's really the pot of gold. In our book, it is marketing's bonanza, but since we can't divine the future, insofar as the actions of the marketing fraternity are concerned, we have titled this paper appropriately, we think, "Licensing: A Marketing Bonanza?"

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AN ASSESSMENT OF THE SIGNIFICANCE OF IMPULSE  
PURCHASING FOR CONVENIENCE STORE RETAILERS

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Abstract

A study of 1014 consumers at four convenience food stores was conducted to identify the characteristics of impulse purchasing behavior and develop a methodologically sound procedure for studying such behavior. The study found that impulse purchasing behavior is significant, varies by product line, and is not necessarily effected by in-store merchandising programs. It was also found that a pre-purchase/post-purchase study procedure can be an appropriate methodology if it is supplemented by an after-purchase interview.

Unplanned or impulse purchasing behavior has been researched for numerous years to determine its significance in retail management decision-making [Stern] [Kollat and Willett]. In fact, E. I. DuPont has conducted periodic studies on unplanned purchasing among supermarket patrons since 1935 [DuPont]. This research suggests that impulse purchasing has increased from 24.6 percent of all supermarket purchases in 1935 to 64.8 percent in 1975 [Chain Store Age].

Bellinger, et.al. recently reported on a study which identified the significance of impulse buying in retail department stores. By asking 1600 shoppers to identify when they decided to purchase the items they had in their possession upon leaving a retail store, the researchers found that 38.7 percent of purchases were impulse [Bellinger, Robertson, and Hirschman].

There are several explanations for differences in the significance of impulse purchasing as identified by DuPont and Bellinger (64.8% vs. 38.7%). First, both studies explored different methodologies. The supermarket study identified customer purchase intentions prior to entering a store, then compared those intentions to actual purchases. The extent of impulse purchasing was determined by subtracting purchase intentions from actual purchases [DuPont]. The primary problem with the methodology employed by DuPont was that consumers may be unable to identify prepurchase intentions because of the large number of items purchased in a supermarket during one visit. Bellinger's study departs from the pre-and-post questioning procedure by simply questioning customers about each purchase when they were leaving the store. Application of Bellinger's procedure, however, would be difficult in supermarket retailing because of the large number of purchases during one visit.

Differences in the significance of impulse purchasing as identified by the studies can also be attributed to differences in the institutions which were studied. The two studies strongly suggest that impulse behavior varies significantly between different types of institutions. Before this observation can be conclusively stated, however, a more valid methodology for studying shopper behavior in supermarkets must be established.

Study of Impulse Buying in Convenience Stores

Although comparing purchase intentions with actual purchases has limited applications in supermarkets, its usefulness should not be completely ignored by researchers. Among convenience store whose customers can remember which items they plan to purchase, the methodology can reveal interesting and accurate find-

ings about impulse buying. Utilization of a pre- and post-measure approach in convenience stores can also provide additional insight into purchase behavior, in general. To identify feasibility of a pre- and post-measure and develop a better understanding of purchasing behavior, a study of convenience store shoppers was conducted. Specifically, the study was designed to accomplish the following:

Determine percentage of purchases which were unplanned or impulse;

Determine the percentage of customers that purchase at least one item on impulse;

Identify the extent of impulse purchasing by product category and demographic characteristic;

Preliminarily observe and study "planned" impulse purchasing behavior.

Measure the effect of a store design that emphasizes a fast food section on impulse buying; and

Develop a methodology that accurately measures impulse purchasing behavior in convenience stores and supermarkets.

Methodology

A survey of 1014 consumers was conducted at four convenience food stores. During a consecutive seven-day period a relatively equal number of interviews was conducted at each store. Times of interviews were varied each day so that all operating hours were represented at each store.

At each store a two-person interview team was employed. These interviewers were responsible for interviewing and subsequently observing customers in the various stores. One person, located immediately outside the entrance would ask respondents about purchase intentions, patronage, and demographic characteristics. The person located inside the store would observe actual purchasing behavior and dollar amount of purchases. Interview forms were subsequently compared to determine extent of impulse purchase (i.e., difference between purchase intention and actual purchase).

The four stores were divided into two groups. The two-store experimental group employed a new design with emphasis on an enlarged fast food section. A traditionally limited fast food section was utilized in control stores. Customer base and store volumes were similar for control and experimental groups.

The study also attempted to provide insight into "planned" impulse purchasing behavior: During questionnaire pretesting it was observed that some shoppers intended to purchase a product from a general product category but had not made a specific product decision upon entering the store. In other words, these shoppers planned to make an impulse decision after more information on product availability, price, and quality could be processed. In order to study this phenomenon, shoppers were probed during the preliminary interview to determine if a specific product or brand decision had been made prior to entering the store.

### Study Findings

Study findings indicated that 30.5 percent (446) of the items purchased were unplanned purchases. Also, 36.8 percent of the respondents purchased at least one item on impulse. The relatively slight deviation between "percent of impulse purchases" and "percent of impulse purchasers" is attributed to the fact that most people that made an impulse purchase only bought one item on impulse. Specifically, 72.4 percent of the impulse purchasers bought one item on impulse, 21.8 percent purchased two items, 4.2 percent purchased three items, and 1.7 percent purchased four items on impulse.

Products that are significantly subject to impulse purchasing (i.e., purchased on impulse more than 50% of the time) are pastries, candy, snack food chips, and gum. Items which are purchased on impulse less frequently than 50 percent of the time are identified in **table 1**. Although not listed in **table 1** because of the relatively small sample size (18 purchases), magazines were purchased on impulse 83.3 percent of the time.

Some consumers planned the purchase of an item from a product category prior to entering the store but did not select a particular brand until in-store evaluation could be made. Study findings indicate that approximately 7.8 percent of all purchases were made in this manner. Items specifically subject to in-store evaluation include (1) pastries, (2) fast food, (3) Juice, (4) candy, (5) soft drinks, and (6) snack food chips. Since the number of "planned" impulse purchases was small for most product categories, no conclusions can be made about its significance. Future studies utilizing larger samples, however, will provide more conclusive evidence of the significance of "planned" impulse purchasing.

TABLE 1  
EXTENT OF IMPULSE PURCHASING\*

Item	Impulse purchases (%)	Non-impulse (%)	General decision on category-not on brands and specific product (%)
Pastries/ Cupcakes	60.7	13.1	26.2
Candy	58.5	25.5	16.0
Snack Food Chips	56.5	31.9	11.6
Gum	54.4	45.6	0
Fast Food	45.8	33.9	20.3
Health/ Beauty Aids	41.0	56.4	2.6
Ice Cream	35.0	60.0	5.0
Juice	31.4	48.6	20.0
Bread	29.4	70.6	0
Dairy Products	26.9	68.9	4.2
Coffee	22.6	75.5	1.9
Newspaper	17.0	83.1	0
Tobacco	16.6	83.0	0.4
Beer	16.4	80.0	3.6
Soft Drinks	14.4	70.4	15.1
Gas	9.8	90.2	0

\*Only items with 20 or more purchases included.

Impulse vs. nonimpulse purchasing was crosstabulated with age, income, race, sex, store type (2 different store layouts), reason for shopping at a particular store, convenience store usage rate, day of the week, and time of the day. Findings of the crosstabulation are presented in **table 2** and indicate that sex is the only variable for which significant variation existed.

Specifically, females made significantly more impulse purchases than males (41.0 percent vs. 35.1 percent).

TABLE 2  
IMPULSE PURCHASING BEHAVIOR BY  
CUSTOMER CATEGORY

Category	Significance
Age	Not significant
Income	Not significant
Race	Not significant
Sex	Significant (.025)
Store Type	Not significant
Reason for Stopping at Store	Not significant
Usage Rate (# of trips in week)	Not significant
Day of Week	Not significant
Time of Day	Not significant

TABLE 3  
IMPULSE VS. NONIMPULSE PURCHASES  
BY STORE TYPE AND CUSTOMER CHARACTERISTIC\*

Product Category	Store Type	Age	Sex	Race
Gum	N.S.	N.S.	N.S.	N.S.
Candy	N.S.	N.S.	N.S.	S(.10)
Dairy Products	N.S.	N.S.	S(.01)	N.S.
Tobacco	N.S.	N.S.	N.S.	N.S.
Bread	N.S.	N.S.	N.S.	N.S.
Coffee	N.S.	N.S.	N.S.	S(.10)
Snack Food Chips	N.S.	N.S.	S(.10)	N.S.
Soft Drinks	S(.02)	N.S.	N.S.	N.S.
Beer	N.S.	N.S.	N.S.	N.S.
Newspaper	N.S.	N.S.	N.S.	N.S.
Health/Beauty Aid	N.S.	S(.05)	N.S.	N.S.
Fast Food	S(.05)	N.S.	N.S.	N.S.
Ice Cream	S(.05)	N.S.	N.S.	S(.10)
Pastry/Cup Cake	N.S.	S(.10)	N.S.	S(.10)
Juice	N.S.	N.S.	N.S.	N.S.
Gas	N.S.	N.S.	N.S.	N.S.

\*Only items with 20 or more purchases included.

For each merchandise line that was purchased 20 or more times, impulse purchasing behavior was crosstabulated with store type, age, sex, and race. **Table 3** shows that store type impacted on the impulse purchasing of soft drinks, fast food, and ice cream. For each of the three products, impulse purchasing was more prevalent in the traditional convenience store (i.e., control stores) layout than in stores that gave additional space to the fast food section (i.e., experimental stores) (see **table 4**). However, more soft drinks, fast food items, and ice cream were purchased in experimental stores than in control stores.

Age impacts on purchasing health/beauty aid products and pastry items. People under 35 are more likely to purchase health/beauty aid items on impulse than people over 35 years of age (47.1% vs. 0%). Also, 67.4 percent of pastry purchases made by people under 35 were impulse purchases while 44.4 percent of such purchases made by people over 35 were impulse.

There is also a significant relationship between sex and purchasing behavior and snack food chips. Although females make a higher percent of impulse purchases than males, males are significantly more impulsive when purchasing dairy products (35.1% of purchases by males were on impulse vs. 11.9% for females) and snack food chips (66.7% for males vs. 33.3% for females).



TABLE 4  
PURCHASING BEHAVIOR BY STORE TYPE

Product Category	Impulse		Non-Impulse	
	Control Stores	Experimental Stores	Control	Experi.
Soft Drinks	18.1%	11.5%	65.4%	74.5%
Fast Food	65.4	30.3	23.1	42.4
Ice Cream	62.5	16.7	37.5	75.0

Product Category	General Idea No Specific Decision	
	Control	Experi.
Soft Drinks	16.5%	14.0%
Fast Food	11.5	27.3
Ice Cream	0	8.3

Finally, white people are more likely to purchase candy, coffee, ice cream, and pastry items on impulse than non-white people. Purchase behavior of whites vs. non-whites is presented in table 5.

TABLE 5  
PURCHASE BEHAVIOR BY RACE

Product Category	Impulse		Non-Impulse	
	White	Non-White	White	Non-White
Candy	62.0%	54.5%	25.3%	36.4%
Coffee	23.4	16.7	74.5	83.3
Ice Cream	41.2	0	58.8	66.7
Pastry	62.5	53.8	8.3	30.8

Product Category	General Idea No Specific Product Decision	
	White	Non-White
Candy	12.7%	9.1%
Coffee	2.1	0
Ice Cream	0	33.3
Pastry	29.2	15.4

#### Discussion and Conclusions

The purpose of the study was to identify the significance of impulse purchasing and "planned" impulse purchasing in convenience food stores, and determine if any variations such as store design impacted significantly on purchasing behavior. Similar to studies of department store and supermarket purchasing behavior, the amount of impulse purchasing in convenience stores is significant. Retailers should, therefore continue to develop in-store promotions that concentrate on high impulse items.

The study also suggests, however, that consumer behavior toward some high impulse items may not be effected by in-store merchandising methods. Specifically, fast food items were purchased on impulse 45.8 percent of the time. The modification of several store layouts to give additional exposure to fast foods did not significantly affect impulse behavior (i.e., impulse purchasing of fast food was higher in traditional stores

than in experimental stores).\* This would indicate that retailers should monitor the impact of merchandising programs on impulse behavior. Although an item may be subject to extensive impulse purchasing, efforts to stimulate that behavior may be unproductive--the item may be frequently purchased on impulse irregardless of what is done by retailers. In this instance, attractive, high profit space should be allocated to items that are impacted more significantly by in-store promotional efforts.

The study preliminarily suggests that "planned" impulse purchasing may be significant for some items. In fact, in excess of 15 percent of final purchase decisions for soft drinks, juices, fast foods, candies, and pastries were not made until in-store product evaluation could be conducted. For items that are subject to in-store evaluation, unit profit should be a primary consideration for space allocation. More research should be conducted to extensively study the profit impact of merchandising techniques which are based on "planned" impulse purchasing behavior.

When analyzed by merchandise line impulse purchasing varies by age, sex, and race. Retailers should, therefore, consider these demographic factors when allocating space to various lines. In predominately young markets, for example, in-store merchandising of health/beauty aids and pastries should reflect the market's tendency toward impulse purchasing.

#### Toward a New Methodology

Although impulse purchasing has been studied for numerous years, more controversy has been generated than productive research activity. Much of the controversy relates to the inadequacy of methodologies to deal with the complexities of impulse purchasing. One of the primary purposes of this study was to observe consumer behavioral patterns in convenience stores and develop a procedure that provides retailers with information that can appropriately be utilized to make more optimal in-store layout and promotional decisions.

Although there were no mechanical or administrative problems associated with the "pre-purchase/post-purchase observation" procedure, there was a theoretical problem. Even though the purchase size was usually small and intentions were normally well known, it was observed by interviewers that some customers overlooked several intended purchases during the preliminary interview. Such an oversight could, of course, result in an overestimation of the significance of impulse purchasing behavior. In future studies, therefore, it is necessary to not only observe actual purchase behavior but interview respondents about the legitimacy of purchases that appear to be impulsive.

A "pre-purchase interview/post-purchase interview" procedure involves the following steps and provides the following information: First, a pre-purchase interview is conducted to identify (1) specific purchase intentions and (2) "planned" impulse purchase intentions (i.e., a decision about general product category has been made but no specific product or brand has been selected). Second, a post-purchase interview is designed to (1) observe deviations from purchase intentions

\* Since the control stores and experimental stores were not selected at random, but were selected because of their size, location, and clientel, this conclusion is tentative.

(i.e., impulse purchases) and identify product categories that are sensitive to impulse purchasing behavior, (2) identify the significance of "planned" impulse purchasing behavior and specific product lines and brands that are purchased after in-store evaluation, and (3) determine the percent of impulse purchases that were actually planned but were overlooked during the pre-purchase interview.

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A COMPARISON VIA REPLICATION ANALYSIS OF PREDICTIVE  
MODELS OF REAL ESTATE SELLING PRICES,  
MULTIPLE CORRELATION WEIGHTS  
VERSUS SIMPLE CORRELATION WEIGHTS

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Abstract

The paper illustrates a procedure for developing a predictive model using simple correlation weights between the criterion variable and the set of predictor variables. Next, this predictive model is compared with a standard multiple regression model via replication analysis.

Multiple regression techniques periodically are subject to condemnation as well as periods of great praise. Cooley and Lohnes (1) cite a study that concludes that "conventional least-squares regression should be dropped from the applied statistician's repertoire in favor of prediction-criterion simple correlation weights for sample sizes less than 200." They also imply that if a researcher wants his multiple regression findings to be taken seriously it would be best to judge their validity using replication samples.

The purpose of this paper is to first illustrate the procedure for developing a predictive model using simple correlation weights between the criterion variable and the set of predictor variables. The next step is to compare this predictive model with a standard multiple regression model via replication analysis. A unique feature of this paper is the size of the norming sample, 1729 complete cases. This extremely large norming sample allows the author to present some interesting findings which may have broad application.

The Data Base

The norming sample was composed from 2,315 real estate transactions which took place during an eight year time span from 1969 to 1976 throughout a city of approximately 100,000 population. The test sample was composed from 105 real estate transactions which took place in 1976. The breakdown of the time series data by year and subdivision appear in [Table 1](#).

TABLE I  
BREAKDOWN OF DATA BASE,  
NUMBER OF OBSERVATIONS BY YEAR

Year	Norming Sample	Test Sample
1969	30	---
1970	206	---
1971	272	---
1972	293	---
1973	373	---
1974	350	---
1975	369	---
1976	422	105
	2,315	105

The test sample was from the most recent time period since the purpose of developing a predictive model is, of course, to forecast the selling prices of homes in the future.

The following independent variables were considered as dummy variables in the initial norming equations; the existence of central air conditioning, of a built-in dishwasher, of a disposal, of a crawl space, of a slab, and of more than one story. Also considered as a dummy variable was the type of exterior construction, brick or wood. Independent variables considered other than the preceding dummy variables were as follows: square footage of lot size, age of house when sold, number of bathrooms, number of bedrooms, total number of rooms minus the number of bathrooms and bedrooms (to remove a possible source of multicollinearity), square footage of livable area minus 144 square feet for each bedroom (an estimate of the average size) and 40 square feet for each bathroom (again to remove a possible source of multicollinearity), the number of fireplaces, and the annual heating cost. A subjective variable indicating the quality of landscaping was included. Finally, time and time squared were included as independent variables. The variable time was the month the sale was made. The base month (the month the first sale was made in the data base) was numbered one. The dependent variable was the price at which the house was sold.

The decision was made to include those independent variables in the norming equations which did not exhibit obvious linear relationships with the other independent variables, and that were found significant, meaningful and interpretable in a multiple regression run.

The Multiple Regression Norming Equation

The norming equation developed from multiple regression procedures is as follows:

$$Y = 16507.41 + 6.028X_1 - 236.54X_2 + 5711.39X_3 + 18.909X_4 - 2807.18X_5 + 3083.35X_6 + 3158.84X_7 + 2923.66X_8 + 50.712X_9 \quad (1)$$

The number of complete cases was 1,709 from the 2,315 cases used in the norming sample. Note that the value of the coefficient of multiple correlation is equal to .84 as shown in [Table II](#).

The next step was to place the values of the independent variables of the test sample into the norming equation deriving estimates for the dependent variable (the actual selling price for the house). Then a simple regression was run between the actual selling price and the estimated selling price. The results are shown in [Table III](#).

TABLE II  
REGRESSION OUTPUT ASSOCIATED WITH EQUATION ONE

Multiple R		.839		
R Square		.704		
Adjusted R Square		.703		
Standard Error		7002.190		
Variable		Beta Value	Standard Error of b value	F value
Sq. ft. living space	X <sub>1</sub>	.295	.328	336.97
Age of the house	X <sub>2</sub>	-.380	9.534	615.48
Central air conditioning	X <sub>3</sub>	.216	400.459	203.41
Heating cost	X <sub>4</sub>	.157	2.096	81.42
Quality of landscaping	X <sub>5</sub>	-.158	260.420	116.20
Existence of fireplace	X <sub>6</sub>	.119	373.996	67.97
More than one story	X <sub>7</sub>	.104	455.318	48.13
Exterior construction	X <sub>8</sub>	.095	442.538	43.65
Month house was sold	X <sub>9</sub>	.091	9.878	26.36

TABLE III  
CORRELATION OUTPUT ASSOCIATED WITH ESTIMATES GENERATED USING NORMING EQUATION ONE  
IN CONJUNCTION WITH THE TEST DATA, CORRELATED WITH THE VALUES OF  
THE DEPENDENT VARIABLE OF THE TEST DATA

Multiple R		.883		
R Square		.779		
Adjusted R Square		.776		
Standard Error		8076.623		
Variable	b value	Beta value	Standard Error of b value	F value
Estimated selling price using norming equation 1	1.324	.883	.082	260.984
Constant - 6492.904				

It must be emphasized that this method of estimating the value of the coefficient of multiple correlation does not capitalize on chance. Since the regression coefficients used in conjunction with the set of independent variables of the test sample were derived from the norming sample, capitalization on chance will not be a problem when the derived estimates are correlated with the actual value.

The numeric value of the coefficient of multiple correlation is unusual in that it is greater than that of the norming samples. There is no reduction in correlation. The fact that the norming sample was extremely large increases the probability of this occurrence. Individuals using this equation for prediction purposes could reasonably expect the amount of shared variance to be equal to .78.

The Simple Correlation Values Used As Weights In The Norming Equation

The simple correlations found in the norming sample between the dependent variable and the set of independent variables used in the multiple regression norming equation were the weights used in the second norming equation.

$$Y_f = r_{y.1} Z_1 + r_{y.2} Z_2 + r_{y.3} Z_3 + \dots + r_{y.9} Z_9$$

$$Y_f = .556Z_1 - .504Z_2 + .547Z_3 + .440Z_4 - .413Z_5 + .176Z_6 + .189Z_7 + .348Z_8 + .253Z_9 \quad (2)$$

The values in the test sample were standardized by using the means and standard deviations found in the test sample. Then estimates of  $Y_f$  were derived by placing the values of the independent variables from the test sample in equation (2).

The next step was to derive values that could be used as predicted values for the selling prices for the 1976 test sample observations. This was accomplished by first standardizing the value of  $Y_f$ . Then the standardized values of  $Y_f$  were altered so that they had the mean and standard deviation of the dependent variable of the norming sample. The mean and standard deviation of the dependent variable of the norming sample was used because the mean and standard deviation of the test sample would not be available in a real world situation. Finally, a simple correlation was run between the actual values of the dependent variable of the 1976 test observations and these predicted values. The multiple correlation coefficient was .872. The results are shown in Table IV.

TABLE IV

CORRELATION OUTPUT ASSOCIATED WITH ESTIMATES GENERATED USING NORMING EQUATION TWO IN CONJUNCTION WITH THE TEST DATA, CORRELATED WITH THE VALUES OF THE DEPENDENT VARIABLE OF THE TEST DATA

Multiple R	.872			
R Square	.761			
Adjusted R Square	.758			
Standard Error	8401.664			
Variable	b Value	Beta Value	Standard Error of b value	F Value
Estimated selling price using norming equation (2)	1.160	.872	.076	235.566
Constant	- 491.305			

The amount of shared variance between the norming equation estimates and the actual values had a decrease of only 2 percentage points when the estimates were derived using simple correlation weights versus multiple correlation weight. Initially, it looks as if simple correlation weights fare rather well, when they are used for prediction purposes. But it must be realized that this particular set of independent variables did not suffer from serious multicollinearity problems. When the "independent" variables have no correlation among themselves then the standardized multiple regression equation weights become nothing more than the simple correlation values between the dependent variable and the specific independent variable. Thus, when the set of independent variables have little multicollinearity among themselves, one might as well use the simple correlation values as predictor weights; the multiple regression weights (which are certainly more difficult to interpret) will yield the same results. When the set of independent variables suffer from multicollinearity, one should distinguish between two cases, small sample size versus large sample size. When the sample size is small, the argument for simple correlation weights is strong due to their relative stability as compared to multiple regression weights which are influenced by the stability of the estimates of covariance among variables. However, when the sample size is large, the increase in the stability of the regression coefficients will generally yield more reliable estimates.

One, however, could always develop two predictive models; the first based upon simple correlation weights, the second based upon multiple regression weights. Then comparisons could be made using a split sample design to determine the more reliable model.

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THE CONVERGENT VALIDITY OF SELECTED METHODS OF DETERMINANT  
ATTRIBUTE IDENTIFICATION: SOME PRELIMINARY FINDINGS

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Abstract

Researchers have been questioning the methodology of determinant attribute identification for the past few years. The objective of this research project is to test the convergent validity of four different methods of determinant attribute identification. Results of the project suggest that the four methods produce varying results.

Research Problem

The purpose of the determinant model is to identify those attributes of a product that are most closely associated to actual behavior or purchase. The most significant feature of the concept of determinant attributes is that an important or salient attribute is not necessarily determinant. Automobile safety has been used to demonstrate this point (Myers and Alpert, 1968). Many consumers regard safety as an important product attribute, yet they fail to perceive major differences in the safety afforded by alternative automobile models; consequently, safety is important to these consumers, but it does not determine brand preference or brand choice.

Although researchers recognize the value of identifying determinant attributes, only the above article has been published concerning a test of the convergent validity of the model. Thus, there is an interesting situation of researchers using varying methods to identify determinant attributes but no recent study showing whether these differing methods yield the same or different determinant attributes.

Background

Approaches to Determinant Attribute Identification

There have been two major approaches used in the identification of determinant attributes. One approach involves some type of statistical analysis where the researcher correlates attribute ratings with behavior to identify those attribute ratings that are most closely associated with behavior. Regression and/or discriminant analysis has generally been used in this first approach.

The other approach can be classified as a heuristic technique since it identifies determinant attributes through attribute ratings. In this approach, the researcher does not use behavioral data but attempts to identify determinant attributes through the use of attribute ratings only. There are three heuristic techniques that have been used. These include the Myers/Alpert technique (Myers and Alpert, 1968), the Hansen technique (Hansen, 1977), and the direct questioning technique (Alpert 1971). These three techniques are briefly defined below.

Myers/Alpert technique. Since the publication of the article by Myers and Alpert in 1968 most researchers

have used the Myers/Alpert dual questioning method when attempting to identify determinant attributes. The method consists of calculating the following two measures:

- (1) A rating of the importance of various product attributes (flavor, color, etc.) for a chosen product category,
- (2) A rating of the degree of similarity/dissimilarity of each attribute for a set of brands in the product category (Aim vs. Crest on flavor, for example).

Both of these ratings are measured on a Likert-type scale, and the scores combined in some manner to yield the determinant attributes. The technique of combining the scores is what differentiates the Myers/Alpert technique from the Hansen technique.

The Myers/Alpert technique combines the two above measures by first multiplying the importance rating times the similarity/dissimilarity rating for each attribute and then averaging these scores. The determinant attributes are those with the highest or lowest average DAS score across the entire sample depending on the scaling technique.

Hansen's Cross Classification Technique. In this working paper, Hansen suggests a cross classification technique of identifying determinant attributes. Respondents are asked to rate importance and similarity/dissimilarity of all attributes just as in the Myers/Alpert technique, but the individual responses are then cross classified so that each attribute has a cross classification table. The concept of determinance, as presented by Myers and Alpert, indicates that those attributes that have high importance and high variation among alternatives are the determinant attributes. Hansen argues that the multiplication procedure might mask certain potential determinant attributes. Hansen's suggestion is to compare only the cell of high importance and high variation across all attribute tables. The attribute with the highest proportion of respondents in this cell is the most determinant.

Direct Questioning Technique. The direct questioning technique is the most straight forward of the heuristic techniques. The researcher asks consumers what factors (attributes) they consider important in a purchasing decision or why they purchased one brand rather than another. The identification of determinant attributes is simply a tabulation of the number of times each attribute is mentioned. The attributes most often mentioned are then the determinant attributes.

Objective of Proposed Research

Although each of the above approaches to determinant attribute identification has been used by researchers, there is no recent study showing whether these techniques yield similar or dissimilar results. The objective of this research project is to test the convergent validity of the various approaches described above.

\*The author would like to thank the University of Virginia, McIntire School of Commerce for its support through a faculty summer research grant.



## Data Collection Considerations

A consumer panel was utilized in the present study to measure actual behavior of panel members through time. In this longitudinal study students at Kent State University were the panel's members. Three separate questionnaires were administered during the seven week period. The first questionnaire was used to measure respondents' past behavior at fast-food chains in Kent, Ohio. The second questionnaire was a repeated (for seven weeks) behavior measure which was completed each Friday of the study period. This questionnaire has two sections--first, respondents indicated which fast-food chains in Kent they had patronized during the week, and secondly, respondents were asked where they intended to eat during the next week. The third questionnaire was administered the last week of the study period, to determine the students' attitudes toward the fast-food chains in Kent.

### Subjects

Students in three sections of Principles of Marketing classes at Kent State University served as subjects in the present research project. The three sections of classes contained 15, 96, and 158 students, respectively. This produced a total possible sample of 269 students. Of these 269 students, 237 or 88 percent of the sample completed all the forms over the seven week period. Thirty-two respondents were eliminated because of missing data or because they chose not to participate in all phases of the study.

### Product Category

The product category of fast-food chains was chosen because of student familiarity with them and because of the high usage patterns by students in Kent, Ohio. In addition to the above reasons of familiarity with fast-food chains and their usage by students, the product category of fast-food chains is compatible determinant attribute analysis. Table 1 shows the percentage of total purchase at each of these fast-food chains during the study period of seven weeks.

TABLE 1  
PATRONAGE OVER THE SEVEN WEEK STUDY PERIOD

Fast-Food Chain	Number of Purchases	Percentage of Total Purchases
Red Barn	76	06%
Arby's	185	14%
McDonald's	470	36%
Burger King	156	12%
Burger Chef	202	15%
Arthur Treacher's	222	17%
TOTAL	1,711	100%

### Attributes

In a pilot study, students were asked: "What features of fast-food chains are important to you when deciding where to eat?" Based on the replies of 260 respondents, the most frequently mentioned attributes which emerged are listed Table 2.

## Analysis And Interpretation Of Data

### The Importance Measure

The importance measure is designed to allow respondents to indicate the degree of importance they place on each of the attributes when choosing a fast-food establishment. Table 2 shows the average importance scores for

each of the attributes and the rank order of these scores.

TABLE 2  
IMPORTANCE OF ATTRIBUTES WHEN CHOOSING  
A FAST-FOOD CHAIN\*

Attribute	Mean	Rank
Fast Service	4.937	3
Pleasant atmosphere	4.785	4
Low regular prices	4.464	7
Low special prices (coupons, discounts)	3.283	9
Clean facilities/personnel	5.350	2
Convenient location	4.599	5
Friendly employees	4.519	6
Good quality food	5.629	1 <sup>a</sup>
Variety of menu items	4.198	8

\* n = 237

<sup>a</sup>Highest importance

### The Similarity/Dissimilarity Measure

To determine similarity/dissimilarity, respondents indicated how similar or different the fast food chains were on each of the nine attributes (see Table 3). This measure was scaled on a one to six Likert-type scale with one labeled "very similar" and six labeled "very different." This scale yielded higher averages for the attributes that had high variation across the six fast-food chains and lower averages for similar attributes. Those attributes perceived as both important and dissimilar are identified as the possible determinant attributes.

TABLE 3  
DISSIMILARITY OF ATTRIBUTES ACROSS FAST-FOOD CHAINS\*

Attribute	Mean	Rank
Fast service	1.962	9
Pleasant atmosphere	2.409	7
Low regular prices	2.392	8
Low special prices (coupons, discounts)	3.038	1 <sup>a</sup>
Clean facilities/personnel	2.451	6
Convenient location	2.966	3
Friendly employees	2.498	5
Good quality food	3.021	2
Variety of menu items	2.709	4

\* n = 237

<sup>a</sup>Greatest dissimilarity.

### The Patronage (Purchase) Behavior Measure

The patronage behavior measure is calculated as the proportion of times a particular chain was frequented out of the total number of times an individual purchased from all fast-food chains over the seven week study period. Table 4 shows the mean patronage behavior measure for each fast-food chain as well as the ranking for the fast-food chains. McDonald's has the highest patronage behavior with an average of 1.983 purchases per week while Arthur Treacher's ranks second and Burger Chef ranks third.

### Comparison Of Techniques

The objective of this paper is to compare the four methods of determinant attribute identification: Myers/Alpert technique; Hansen technique; discriminant analysis technique; and the direct questioning technique.

TABLE 4  
DEPENDENT MEASURE: PATRONAGE BEHAVIOR

Restaurant	Patronage Behavior	
	Mean	Rank
Red Barn	.321	6
Arby's	.781	4
McDonald's	1.983	1
Burger King	.658	5
Burger Chef	.852	3
Arthur Treacher's	.937	2

\*  
n = 237

#### Determinant Attributes-Discriminant Technique

The Myers and Alpert definition of determinant attributes adopted in this study defines them as those attributes or features which are most closely related to actual purchase decisions. To identify those attributes, the present researcher has divided the sample into two groups, users and nonusers of the fast-food chains. Discriminant analysis is then employed to derive the linear combination of predictor variables and their F-values so those that account for the greatest differences between the group of users and nonusers of fast-food chains may be identified. The predictor variables used in the discriminant analysis were calculated using the Myers and Alpert multiplication technique:

$$DAS_{ji} = I_{ji} * SD_{ji} \quad (1)$$

It should be noted that the Myers Alpert technique of determinant attribute identification averages the  $DAS_{ji}$  scores while the discriminant technique uses the raw unaveraged  $DAS_{ji}$  scores.

Thirty-one of the 237 respondents who did not eat at fast-food chains during the seven week study period are the nonusers group. A total of 206 respondents are in the users groups. Using the SPSS program, the following linear combination of predictor variables resulted:

$$D = .81309x_3 - .78863x_4 - .58603x_6 \quad (2)$$

where:

$x_3$  = low regular prices,

$x_4$  = low special prices (coupons, discounts),

$x_6$  = convenient location.

The equation is significant at  $p < .05$ .

The F-value associated with each of the above predictor variables indicate that low special prices is the only determinant attribute at a significance level of .05. Relaxing the significance level to .10, convenient location becomes the second most determinant attribute in identifying users from nonusers.

While the above discriminant function was significant at  $p < .05$ , the results must be interpreted with caution for two reasons. First, the researcher did not control for sample sizes in the groups of patrons and non-patrons. The result of this was that the patron group contained 206 individuals and the non-patron group contained only 31 individuals. Because of this small group of non-patrons, the researcher conducted further analysis by redefining the respondents as casual users versus regular users. The casual user category contained 54 individuals who made one or less purchase during the seven week study period. The regular user

category contained 183 individuals who purchased two or more times. When the discriminant analysis was rerun for casual versus regular users, four variables were significant at the  $p < .10$  level. Once again, the four variables were low special and convenient location, plus fast service and low regular prices. While the results included two additional variables, low special prices and convenient location appeared again as discriminators in this second analysis.

The second reason the results must be interpreted with caution is that discriminant analysis assumes equality of covariance matrices within the groups. Nie, *et al.* state the following regarding this assumption (Nie, *et al.*, 1975):

The statistical theory of discriminant analysis assumes that the discriminating variables have a multivariate normal distribution and that they have equal variance-covariance matrices within each group. In practice, the technique is very robust and these assumptions need not be strongly adhered to.

While they suggest that the technique is very robust, the present researcher checked for the equality assumption in both the above analyses and found that neither the users versus nonusers nor the casual users versus regular users had equality of covariance matrices.

#### Determinant Attributes-Myers/Alpert Technique

Table 5 contains the average DAS scores in the present study using the Myers/Alpert technique. The most determinant attribute is good quality food, the second convenient location. Ranked third and fourth were clean facilities/employees and pleasant atmosphere, respectively. Myers and Alpert did not suggest any objective criteria for selection of the number of attributes which are determinant; therefore this researcher has used, for comparison with the discriminant technique, the two highest mean DAS scores. Inspection of Table 5 shows good quality food and convenient location are the determinant attributes using the Myers/Alpert technique.

TABLE 5  
DETERMINANT ATTRIBUTES-MYERS/ALPERT TECHNIQUE\*

Attribute	Mean DAS Score	Rank
Fast service	9.6371	9
Pleasant atmosphere	11.4051	4
Low regular prices	10.7637	7
Low special prices (coupons, discounts)	10.2194	8
Clean facilities/personnel	12.9620	3
Convenient location	13.6793	2
Friendly employees	11.0717	6
Good quality food	17.0169	1
Variety of menu items	11.1814	5

\*  
n = 237

#### Determinant Attributes-Hansen Technique

Table 6 presents the percentage of respondents indicating high importance and variation for the nine attributes using the Hansen technique. Inspection of this table identifies good quality food as the most determinant attribute while convenient location is the second most determinant attribute.

TABLE 6  
DETERMINANT ATTRIBUTES-HANSEN TECHNIQUE\*

Attribute	Proportion of Respondents in Cell Nine	Rank
Fast service	2.1%	9
Pleasant atmosphere	2.5%	8
Low regular prices	3.4%	6
Low special prices (coupons, discounts)	3.8%	4.5
Clean facilities/personnel	4.6%	3
Convenient location	7.6%	2
Friendly employees	3.8%	4.5
Good quality food	13.9%	1
Variety of menu items	3.0%	7

\* n = 237

#### Determinant Attributes-Direct Questioning

The direct questioning technique requires the researcher to ask customers why they choose one brand rather than another. This open ended question was coded using three categories of responses: attribute reasons; social reasons; and miscellaneous reasons.

Table 7 indicates the percentage of each of the reasons given by respondents for their purchases during the seven weeks. The most determinant attribute based upon the greatest number of mentions is convenient location, the second is variety of menu items.

TABLE 7  
DETERMINANT ATTRIBUTES-DIRECT QUESTIONING\*

	Number	Percent
<u>Attribute Reasons</u>		
Good quality food	76	11
Quantity of food	3	0
Variety of menu items/type of food	133	20
Convenient location	217	32
Fast service	119	18
Low regular prices/inexpensive	59	9
Low special prices (coupons, discounts)	68	10
	675	100%
<u>Social Reasons</u>		
Decision made by another	27	40
Joint decision	41	60
	68	100%
<u>Miscellaneous Reasons</u>		
Novelty (change of pace)	32	24
Past behavior extension	12	9
Desire for privacy	6	5
Global evaluation	19	14
Unspecified reasons	63	48
	132	100%

\* 436 of the 1,311 purchases did not have reasons given.

#### Determinant Attributes-All Techniques

The two shortcut methods by Myers/Alpert and Hansen produced the same determinant attributes. This researcher is presently conducting another study which also produced the same results between these two shortcut techniques.

The discriminant analysis identifies low special price as the most determinant with the second most determinant attribute as convenient location. The direct question technique identifies convenient location as the most determinant and the second most determinant as variety of menu items. The results indicate that convenient location was identified as determinant using any of the

techniques while that consistency does exist between the techniques, the other determinant attribute varies for each technique.

#### Implications

The methodology and findings from the present research project have implications and significance to both marketing researchers and managers. While all four techniques purport to accomplish the same results, it appears that the convergent validity of determinant attribute analysis can be questioned.

Determinant attribute analysis is a potentially powerful for marketing managers in the process of both constructing and evaluating their marketing strategies. Use of determinant attribute analysis by marketing managers will enable them to identify the attributes that are more significant to consumers when choosing one brand over another. With this information, marketing managers can reposition their products/services either by changing their offering to include this attribute and/or by stressing this attribute in their promotion mix if they are not doing so.

The findings of this study have important implications and significance to marketing researchers, that is, those engaged in scholarly research in marketing. Even though a number of articles have been published which question the Myers/Alpert procedure, this study represent the first test of the Myers/Alpert determinant attribute identification technique since the concept was introduced in 1968. The lack of convergent validity found in the present study for the four techniques of determinant attribute identification should stimulate other researchers to investigate this issue.

#### Suggestions for Subsequent Research

The present study suggests a number of subsequent research projects that should be performed. First, the study should be replicated using other product categories and samples. This could provide a framework for stronger and more externally valid conclusions. Specifically, a panel study using a population other than students and a durable goods product category, if tested, would provide the ability to compare and integrate the findings of that study and the present one.

Further research on the convergent validity of the determinant attribute techniques is also suggested by this study. Subsequent studies should be undertaken to identify determinant attributes using an experimental design where the researcher could control for the number of users and nonusers of the product. If this study were undertaken, the discriminant analysis method of determinant attribute identification might provide stronger conclusions.

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## SEMANTIC QUANTIFICATION: A CROSS-CULTURAL PERSPECTIVE

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### Abstract

Marketing research makes extensive use of semantic stimuli in scaling procedures. Magnitude estimation provides a technique for assessing respondents' quantitative assessments of words or phrases used as scale anchor points. Hispanic and non-Hispanic respondents estimated the numerical value of a series of expressions of amount. Minimal differences were found between the cultural groups.

### Introduction

Consumer research in marketing makes extensive use of assessments of amount, frequency and evaluation. A consumer respondent might be asked to assess to what extent he/she agrees with a statement of product utility, the degree of importance associated with a given product attribute or the frequency with which a given product is consumed in the household. For example a question could ask, "How often do you dine out?" Possible responses to such a question could include "regularly," "occasionally," "not too often," etc. There are a wide array of such modifiers available to express the range of such judgments as to both amount (none at all) and frequency (never to always). In the qualitative mode a respondent might be asked to assess the taste of a beverage on an evaluative (good/bad) scale.

The analytical phase of such consumer research typically involves attaching numerical values to responses. The level of data (ordinal, interval or ratio) obtained by such attachments is conjectural as is often the appropriateness of the specific value assigned. Response values are assigned on the basis of position on a linear scale, on the basis of the meaning of the adjective label used, or on some combination of both (Green and Tull, 1978, Churchill, 1979). Recent research has supported the importance of label modifiers as a factor governing subject responses (Wildt and Mazis, 1978).

A research tradition has been evolving to quantify the semantic stimuli utilized in scale point description. Recent studies have indicated that such semantic stimuli can be quantified (Bass, Cascio and O'Connor, 1974, Schreisheim and Schreisheim, 1978, Bradburn and Miles, 1979).

Cross-cultural market research is assuming increasing importance with the internationalization of marketing. However such research raises some very significant methodological questions. Green and White (1976) discussed these issues in a recent paper. A major problem area that they identified was that of measurement, i.e., do research instruments validly measure the phenomena under study in each of two cultures? As cross-cultural analysis is typically searching for similarity and/or difference on a cultural basis the investigative issue is whether research results are an artifact of the research process, or more specifically the research instrument, or that the results truly reflect the underlying reality.

The specific issue investigated in this study involved the assignment of numerical values to a series of terms used to express amount in a semantic mode. The re-

search was designed to determine if there was a cultural component in the determination of these quantitative values. The research hypothesis may be succinctly stated: "Respondents from different cultures (Hispanic and non-Hispanic) will assign different quantitative values to a set of seven expressions of amount."

### Method

The investigation draws heavily on the research tradition of psychophysics, the discipline which is concerned with the measurement of sensory and perceptual phenomena (Stevens, 1975). The particular technique utilized in this research was magnitude estimation which utilizes direct quantification of semantic stimuli by the respondent (Stevens, 1975, pp. 26-31). The distinguishing characteristic of magnitude estimation is that it permits the achievement of the highest level of measurement, namely the ratio scale. As Stevens notes in comparing magnitude estimation to the more typical procedure (in marketing research also) of category scaling.

"... the category scaling procedure seems seductively simple. As a consequence, unfortunately, the procedure enjoys unmerited popularity. Category procedures result at best in interval scales, not in ratio scales. In most cases only a slight rewording of the instructions would allow the observer to employ, not a restricted set of category numbers, but any numbers he thinks appropriate to express the apparent magnitude of the stimulus. It would then be possible for the observer to generate a ratio scale." (Stevens, 1975, p. 231)

The research made use of the following seven expressions of amount: "no", "somewhat", "a moderate amount of", "quite a bit of", "a great amount of", "an extraordinary amount of", and "all". Previous investigation had suggested that these seven expressions of amount provided an equal-interval ratio scale, the level of measurement which provides the maximum degree of analytical versatility. The value generated by the semantic stimulus, "no", represented the zero on the scale derived by Bass, Cascio and O'Connor, (1974). The instructions provided to subjects are descriptive of the technique of magnitude estimation and are reproduced below:

In subsequent questions, you will be asked to determine how important various characteristics are when choosing a university. For example, you may feel that the quality of a business school's faculty is "somewhat" important to you in choosing a university. Would you please assign a number to what you conceive "somewhat" to mean. You may use any number that seems appropriate to you and is greater than, or equal to, zero (0). Please place the number of the line next to "somewhat".  
Somewhat \_\_\_\_\_

Now, using the number you assigned to "somewhat" as a standard, please assign a number to each of the other words below indicating each word's value relative to "somewhat". Again, use any number greater than, or equal to, zero (0). The number placed next to each word or phrase should reflect what you feel that word



or phrase means when compared with "somewhat". For example, if you assign a value of 50 to "somewhat" you might assign the value 100 to any other word or phrase which you feel represents twice the amount of importance as "somewhat", and a value of 5 to any word or phrase which seems to represent only 1/10 the amount of importance as "somewhat". You may use any whole or decimal number greater than zero (0), just as long as you feel it represents the numerical value of a word or phrase when that word or phrase is compared with "somewhat".

- No \_\_\_\_\_
- A Moderate Amount of \_\_\_\_\_
- A Great Amount of \_\_\_\_\_
- Quite a Bit of \_\_\_\_\_
- An Extraordinary Amount of \_\_\_\_\_
- All \_\_\_\_\_

The subjects of the research were undergraduate business students located in a major metropolitan area in the southeastern United States. The community, and the university, has a large Hispanic component.

It is recognized that there is some controversy over the use of student subjects in marketing research (Cunningham, Anderson and Murphy, 1974, Morgan, 1979). Their use in this study is justified by the following factors:

- (i) in that the research employed a new (to marketing) methodology and thus was exploratory in nature
- (ii) the use of business students isolated the cultural dimension of the study (the issue of interest) to the maximum extent in that it eliminated educational differences, a presumed source of variation in semantic quantification.

A total of 181 students participated in the study - 73 were Hispanic, 108 were non-Hispanic. The cultural assignment was made on the basis of "the primary language of your parents" with students with both parents native Spanish-speaking being labeled as Hispanic. The data was collected with an English language questionnaire.

### Results

As noted earlier, the seven expressions of amount were chosen on the basis that they represented an equal-interval 7 point ratio scale. As a corollary this implied that there was an expected ordering of the values assigned to the expressions. Thus the initial data analysis involved non-parametric correlation of each subject's derived rank ordering of the seven stimuli with the predicted ordering. The results are displayed on Table 1. Spearman correlation was the nonparametric procedure utilized. Inspection of Table 1 indicates that the majority of students implicitly ordered the semantic stimuli consistently with expectations. However, it should be noted that Hispanic subjects showed a lesser propensity to order the expressions in the expected manner.

TABLE 1  
CROSS-CULTURAL COMPARISON OF DERIVED ORDERINGS OF SEMANTIC STIMULI WITH EXPECTED ORDERING

Significance Level of Spearman Correlation Coefficient	Non-Hispanic	Hispanic	Total
	< .05	83.3%	68.5%
> .05	16.7%	31.5%	22.7%

The primary analysis was performed using a one-way multivariate analysis of variance (MANOVA). The program utilized was BMDX69 (Dixon, 1973). Using untransformed raw data as input, the non-significant multivariate F (1.15, d.f. = 1, 7) representing the comparison of scale values assigned to the seven expressions of amount between the two cultural groups (Hispanic and non-Hispanic), was obtained. The mean scale values for each cultural group and the significance of the differences between cultural groups have been summarized in Table 2.

TABLE 2  
MEANS OF EXPRESSIONS OF AMOUNT FOR UNTRANSFORMED DATA

Expression	$\bar{X}$	$\bar{X}$	Statistical Significance
	Hispanic	non-Hispanic	
Somewhat	18.77	11.23	p<.05
A Great Amount of	22.41	16.96	N.S.
Quite a Bit of	22.51	15.88	N.S.
An Extraordinary Amount of	26.74	20.43	N.S.
All	29.65	21.39	N.S.
No	2.41	2.15	N.S.
A Moderate Amount of	16.84	11.77	N.S.

The raw data were then transformed following the suggestion of Stevens (1975). Because different subjects might have chosen different anchor values for the referent concept (e.g., to one person might assign the value 10 to "somewhat", while to another "somewhat" might mean 100), the data was transformed so that each student's anchor value was the same, namely 50, and all other values were multiplied by the result. The multivariate F was again not significant. The transformed data has been summarized in Table 3.

TABLE 3  
MEANS OF EXPRESSIONS OF AMOUNT FOR TRANSFORMED DATA\*

Expression	$\bar{X}$	$\bar{X}$	Statistical Significance
	Hispanic	non-Hispanic	
Somewhat	50.00	50.00	N.S.
A Great Amount of	75.03	83.37	N.S.
Quite a Bit of	74.34	76.22	N.S.
An Extraordinary Amount of	102.32	108.06	N.S.
All	112.29	115.59	N.S.
No	10.30	9.18	N.S.
A Moderate Amount of	56.44	54.41	N.S.

$$*\text{Transformed expression} = \frac{50}{\text{Score (somewhat)}} \times \text{Score (expression)}$$

### Discussion

The hypothesis of the study, namely that the assignment of quantitative values to a set of semantic stimuli was culture dependent was largely not supported. Neither multivariate analysis of variance and only one of the thirteen univariate analyses of variance exhibited a statistically significant difference. However the non-parametric Spearman correlations indicated some cultural



difference in semantic quantification, and inspection of Table 2 indicates that for all the expressions of amount the mean values for Hispanics were higher than those of non-Hispanics. It is possible that if the sample size was larger the differences might be statistically significant. In any event, the differences that the data display could potentially distort a study utilizing semantically defined scales. If a market research study were to utilize a scale value such as "somewhat important" and cross-cultural comparisons were desired the results of this research suggest that differences could be found based on cultural distinctions in the assessment of semantic meaning, as contrasted to the "true" differences that such investigation would be seeking. It should also be recognized that the homogeneous nature of the sample (excepting the cultural dimension) made the research a very strong test of the hypothesis.

The study described in this paper represents an exploratory attempt to explore an area of cross-cultural research which we believe is of great significance for international marketing research. A more extensive set of expressions of amount and the study of expressions of frequency ("always", "sometimes", "never") and evaluation ("excellent", "fair", "bad") would appear as avenues for future research. Of even more importance to cross-cultural research is the investigation of the language factor in semantic quantification. What quantitative impact is there in translating the English "always" to the Spanish "siempre"?

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TASK COMPLEXITY IN CONJOINT VIGNETTES: SOME  
EMPIRICAL FINDINGS WITH MARKETING IMPLICATIONS

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Abstract

This empirical investigation examines variations in measures of task-complexity as a result of using different conjoint vignettes. The two most commonly used conjoint vignette techniques for stimulus description are comparatively evaluated: Two-Factor-Evaluation and Multiple-Factor-Evaluation Vignette Techniques. The empirical findings on the comparative analysis on task-complexity in conjoint vignettes and their implications for market-researchers and users of conjoint analysis are also discussed.

Introduction

It is often argued that marketing questionnaires and interviews are not apt for studying consumer behavior and attitudes because of unreliable and biased self-reported responses. The reason most frequently cited is that judgments required of respondents are often suspect from an interpretative point of view. To correct this problem in survey research, the use of vignettes--systematic descriptions of concrete situations--is being suggested as a means of producing more valid and reliable measures of respondent opinion than the simpler abstract/ambiguous questions more typical of opinion surveys (Alexander and Becker 1978).

The use of vignettes in survey research is strongly advocated in some social science literature (Nosanchuck 1972; Rossi et al. 1974). To date most uses of vignettes have been confined to certain areas of experimental-social-psychological research. However, in marketing research (with advert of conjoint analysis and related techniques) vignettes have generally come to stand for short descriptions of a product, product concept, and/or consumer/marketing situations which contain precise references to what are thought to be the most critical attributes in the choice-making process of respondents (Hauser and Urban 1977).

The main advantages offered by the use of vignettes in marketing are: (a) simple, abstract, and direct questions about marketing situations are avoided where respondents impute such information themselves, (b) marketing stimuli are made as concrete and detailed as possible, (c) stimuli presentation is standardized across all respondents. Therefore, higher homogeneity of perceptions can be obtained, (d) respondents tend to view the stimuli to be more realistic and their tasks to be more interesting and less fatiguing.

Vignettes in Conjoint Analysis

Most conjoint analysis studies in marketing have utilized vignettes which are generally hypothetical stimulus descriptions. This offers an added advantage of allowing the researcher to compare predicted behavior with the actual respondent behavior toward real products, etc. Also, this may be the only option because of the limited number of brands available in a product category with which a respondent may be familiar. But, perhaps the most interesting aspect of the vignette technique in conjoint analysis is that it makes possible an analysis of the effects on respondents' judgments by systematically varying the attributes used in marketing-situation description. There are two major

conjoint vignette techniques used to vary the key attributes for a stimulus description: (a) two-factor-evaluation (TFE) conjoint vignette technique, (b) multiple-factor-evaluation (MFE) conjoint vignette technique.

In the TFE vignette approach, marketing situations/product concepts are described in terms of pairs of attributes and the respondent is required to provide preferences/judgments for all possible combinations of levels generated from a pair of attributes. This vignette methodology is also referred to as the "trade-off procedure" by Johnson (1974). The other parallel method, MFE involves presenting the respondents with a number of vignettes where each one has been described in terms of a specified level for each attribute or factor. Vignette procedure of this type in conjoint analysis has been advocated by Green and Rao (1971) and Green and Wind (1975).

There are different claims being made regarding the superiority of alternative conjoint vignette techniques. Several questions can be raised with respect to differences among the MFE and TFE vignette techniques. For a detailed treatment and discussion on this aspect, the reader is referred to studies by Colberg (1978), Green and Srinivasan (1978), Jain et al. (1979), and Segal (1979). However, the task complexity presented in alternative MFE and TFE vignettes can be a basis of preference for one technique over the other. This is specially true if the response time and its associated field costs are going to be a determining factor in a given research investigation.

The variable of task complexity can be operationalized by using the response time as a proxy variable and to examine differences in response time between the alternative vignette methods. The purpose of this study is to document the existence and distribution of task-complexity presented in alternative conjoint vignettes.

Research Procedure

A convenience sample of approximately 100 undergraduate students was selected for the empirical investigation. Because of 16 incomplete responses, only 84 were usable for data analysis. This represented a 84% response-rate which is what was expected. To enhance the validity of the study, the choice situation selected was determination of student housing preferences for apartments. Three apartment attributes were considered to be important for apartment selection. They were: (a) size of the apartment (described in terms of number of bedrooms), (b) price of the apartment (described in terms of monthly rental fee), and (c) location of the apartment (described in terms of distance to campus).

As a part of the research experiment, each respondent supplied rank ordered preference judgments for all pairs of apartment-attribute-levels (TFE vignette procedure). Each respondent was also asked to take a note of the time when they started the task and also to make a note of the ending time. All these respondents also provided data via MFE vignette method by sorting and arranging all possible combinations of apartment vignettes (given on a 3x5 card) in their order of preference. respondents

also took a note of beginning and ending times for the MFE vignette task. Both vignette tasks were randomly assigned so as to avoid any order bias. Each respondent performed an intervening task (filling out a short questionnaire on background information) prior to supplying data via each vignette method. It was hoped this will prevent the halo effect resulting from responding to several variations of vignettes on the same topic.

#### Data Analysis and Results

The data analysis assumes that the variable of response time is directly proportional to the underlying variable of task-complexity. The higher (lower) the amount of time taken by the respondent to complete a task, the higher (lower) the complexity related to that task or vignette. Vignette complexity is defined from the respondent's point of view.

Summary measures on response times for alternative vignette techniques are displayed in Table 1. As shown

TABLE 1

SUMMARY COMPARISON OF DIFFERENCES IN LEVELS OF RESPONSE TIME (IN MINUTES) AND PAIRED t-TEST FOR DIFFERENCES BETWEEN MFE-RESPONSE TIME AND TFE-RESPONSE TIME (n=84)

Variable*	Mean	St. Error	t-Value	Significance**	
				=0.01	=0.05
RTMFE	11.09	0.49	NA	NA	NA
RTTFE	5.14	0.22	NA	NA	NA
DIPTIME	5.95	0.46	12.75	sig.	sig.

\* RTMFE = Response time for MFE vignettes  
 RTTFE = Response time for TFE vignettes  
 DIPTIME ( $d_t$ ) = Difference in response time (RTMFE-RTTFE)

\*\* Significance is tested with the following t critical values (two-tailed tests):

$$t_c ( = 0.01 \text{ and } 60 \text{ d.f.} ) = 2.660$$

$$t_c ( = 0.05 \text{ and } 60 \text{ d.f.} ) = 2.000$$

in the table the mean response time value for the MFE vignette procedure is 11.09 minutes and the comparative average time taken by subjects for the TFE vignette procedure is 5.14 minutes. Therefore, on an average, respondents took approximately twice as much time to complete the MFE vignette task as they did for the TFE vignette task.

The maximum time taken by a subject to complete the MFE vignette was 25 minutes. However, the least amount of time taken by a subject to complete either task was only two minutes. This indicates that there were variations and individual differences with respect to the time taken by a respondent to complete either task. Therefore, some measures of relative dispersion in response time must also be examined. The Coefficient of Variation ( ) as a measure of dispersion reported in Table 1 is very comparable for both vignette techniques: 40.16% for MFE and 39.16% for TFE. This indicates that the degrees of dispersion in response time as a percent

of the average response time for both techniques were comparable.

Even though no specific null and alternative hypotheses were formulated, the differences in response times for alternative conjoint vignette techniques can be statistically evaluated. A paired t-test was used for this purpose and the difference in response time ( $d_t$ ) was calculated for each respondent by using the equation:  $d_t = (\text{response time for MFE vignette task} - \text{response time for TFE vignette task})$ . Under the null hypothesis ( $H_0$ )  $\bar{d}_t = 0$ . All relevant statistics to perform the t-test and the results of the test are reported in Table 1.

The mean difference ( $\bar{d}_t$ ) between the levels of two response times is 5.95 minutes with a standard deviation of 4.27 minutes. The null hypothesis is tested for both assumed alpha risk levels of 0.01 and 0.05. Null hypothesis ( $H_0$ ) is rejected at each level of significance and as a result alternative hypothesis ( $H_A$ ) is accepted. Therefore, results from the paired t-test indicate that the levels of response time reported for the MFE and TFE vignette tasks differ significantly (on an average basis). As a result of this, it can be said that levels of task complexity presented in each conjoint vignette set vary significantly.

#### Conclusions and Implications

Results from this empirical investigation can now be summarized. Major findings on the issue of conjoint vignette task-complexity are: (a) on an average basis, respondents took approximately twice as much time to complete the MFE vignette task as they did for the TFE vignette task, (b) the degree of variability is response time as a percent of average time was equivalent for both conjoint vignettes, and (c) the levels of task-complexity in alternative conjoint vignettes vary significantly and a MFE conjoint vignette is found to be more complex than a TFE conjoint vignette.

The empirical findings on the comparative analysis on task-complexity in conjoint vignettes are conclusive and have implications for the applied market researchers that must be noted carefully. Since, the respondents, on the average, took twice as long to complete the MFE task (as they did to complete an equivalent TFE task), the MFE conjoint vignette is found to be more complex than the TFE vignette task. These findings are in congruence with the ones reported by Colberg (1977). Since the response time (and associated interviewing costs) can be a critical factor, it is recommended that market researchers should use the TFE conjoint vignettes to gather conjoint data. However, it is possible to cut response time and associated interviewing costs for the MFE vignette techniques by using some sort of fractional factorial designs (Green 1974).

Even though the results of this empirical investigation are conclusive, but any generalization must be tempered with caution because of several reasons. First, criteria other than response time must also be considered before any particular conjoint vignette technique is recommended (Segal 1979). Second, response time (task-complexity) is clearly a function of the number of attributes and the levels per attribute used in the study. Therefore, generalizations must be limited to the problem-context and size of the empirical investigation. Lastly, operationalization of the variable of task-complexity via response time may be oversimplified. Future researchers must evaluate the issue of task-complexity from consumers' information-processing point of view.

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SEQUENCE, POLE AND CONTEXT EFFECTS  
IN SIMILARITIES RATINGS

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Abstract

Numerous potential sources of bias relating to questionnaire layout have been identified. Using a multivariate approach, this research investigates the presence of three types of order bias in the collection of similarity ratings. Ordinal position and pole orientation effects were generally not significant while contextual contamination was consistently present.

Introduction

The possible existence of response biasing effects deriving from various elements of questionnaire design has long been recognized. Such effects may be of a variety of sorts and stem from processes that to date have not been placed in an orderly comprehensive theoretical framework. The particular general situation of interest here is where the respondent is presented with a series of similar rating scales for the purpose of measuring several stimulus objects on a single dimension, one stimulus object on several dimensions, or other variations. Specifically, this study concerns the rating of pairs of stimuli with regard to their "similarity," no particular dimension being specified. Data gathered in this manner commonly form the basis for input to multidimensional scaling algorithms (Green and Rao, 1972; Green and Carmone, 1970).

Within the context of unidimensional scaling tasks researchers have postulated and/or investigated several sources of biasing effects. Ferber (1952) found that rating high income professions first induced respondents to set a more strict rating standard for subsequently listed occupations. In a "select  $x$  of  $n$ " task, Campbell and Mohr (1950) found no effect of ordinal position, while Becker (1954) found that the proportion of times a stimulus was selected decreased steadily with later ordinal positions. Landon (1971) found significant contextual contamination in the application of a semantic differential scale. Other authors have cited a tendency to select responses at the beginning of a line due to carelessness (Vernon, 1939), an apparent tendency to select items at the extreme positions in a list (Payne, 1951), an anchoring effect whereby early responses provide comparative benchmarks for subsequent responses (Sherif, Sherif and Nebergall, 1965), and a motive for internal consistency (McGuire, 1960), as potentially biasing factors. In the somewhat different context of paired comparison taste tests, Greenburg (1958, 1963) reports a significant order of presentation effect, while Day (1969) provides evidence that this effect does not necessarily occur.

In the more problematic context of collecting similarities judgments for multidimensional scaling, wherein alternative measurement approaches have received considerable attention, only one study of order effects has been published. Jain and Pinson (1976), based on a pilot experiment, found that INDSCAL solutions were insensitive to the order of presentation of 56 pairs of cities for rating.

Ordinal position per se would seem to motivate only a single general effect. Namely, due to fatigue and/or waning interest, subjects may respond less thoughtfully, i.e., more randomly, to later items. Alternatively, subjects may employ heuristics yielding systematic (at the individual level) but invalid responses. Both the fatigue-interest and non-common heuristic influences would be reflected in a larger variance in ratings across subjects. However, there seems to be no reason to think that subjects would, in aggregate, systematically rate later items higher or lower than earlier items.

Pole orientation has received very little empirical study and theoretical conflicts between primacy versus recency effects do not suggest that subjects favor the left or right hand portions of a scale.

The presence of contextual contamination is widely, though not universally (Osgood, 1957), recognized. Results of two empirical studies (Ferber, 1952; Landon, 1971) indicate an indirect relationship whereby higher earlier ratings lead to lower subsequent ratings and vice versa.

The purpose of this study is to investigate the presence of sequence, pole, and context effects in similarities ratings and to describe the nature of these effects if present.

Methodology

Data Collection

The stimulus objects utilized in this study were five adjectives (yielding ten stimulus pairs) selected from a list of fifty originally compiled by Myers and Warner (1968). The adjectives selected had low variances on a favorableness dimension as evidenced by the Myers and Warner study as well as results of a pretest of some 158 subjects for this study. The adjective stimuli were also drawn at varying intervals on the favorableness dimension. The intended effects of these selection criteria were to mitigate variance in responses attributable to true differences in subjects' perceptions of the stimuli and to evoke a variety of responses across stimuli (pairs), at least on the single obvious dimension of favorableness. As this study addresses similarities data which are presumably multidimensional and not necessarily of common structure or space across subjects, the intended effects of the selection criteria may be only partially achieved. The ten adjective pairs are presented in [Table 1](#).

Subjects for this research were second and third year undergraduate business students. While appropriate in the sense of constituting an a priori homogeneous experimental group, use of student subjects may limit the generalization of results to other populations. It is possible that students are more analytical and more accustomed to abstract scenarios than are members of other market segments. Consequently, they may be less influenced by the questionnaire design factors investigated herein. Nevertheless, the relative effects of these factors are not necessarily altered and any

TABLE 1  
ADJECTIVE PAIRS USED AS STIMULUS OBJECTS

Adjective Pair	Adjectives
1	terrific, exceptionally good
2	terrific, extremely good
3	terrific, remarkably good
4	terrific, quite good
5	exceptionally good, extremely good
6	exceptionally good, remarkably good
7	exceptionally good, quite good
8	extremely good, remarkably good
9	extremely good, quite good
10	remarkably good, quite good

effects found to be significant here are by similar reasoning presumably more pronounced in non-student groups. A field study utilizing business managers is currently underway to corroborate the results reported here.

Printed instructions directed the subjects to "... rate each of these pairs according to how similar the two adjectives are. The key consideration is how much alike are the two adjectives in each pair in terms of overall similarity. If you feel the two adjectives are very similar, you should give the pair a fairly high rating toward the 'more similar' end of the scale. And, of course, if the two adjectives are not so similar you should rate the pair toward the 'less similar' end." The single page of instructions was followed by a second page containing all ten possible pairings of the five adjectives. Thus, the entire set of adjective pairs was available at once to the subjects.

The rating instrument was a nine-point bipolar "less similar - more similar" semantic differential type scale with the corresponding scale value printed under each line segment. For each subject the basic order of presentation (i.e., sequence) of the ten adjective pairs was randomized as were the rating scale poles, and the order of the two adjectives comprising each pair.

Approximately two weeks after the initial phase data collection, a retest of the same subjects was carried out under identical conditions. Seventy-three usable data sets were obtained in the first data collection phase and 55 of these subjects completed the retest.

#### Operational Hypotheses

The theoretical considerations discussed earlier give rise to the following operational hypotheses.

H1: Sequence Effect - The ordinal position of a given adjective pair does not affect the level of its similarity rating. No a priori rationale suggests that subjects systematically rate stimuli appearing later either higher or lower than stimuli appearing earlier.

H2: Pole Effect - Ratings of a given adjective pair will be higher when the "more similar" (higher score) pole appears at the left and lower when the "less similar" pole appears at the left. A modicum of theory and empirical evidence suggests

that subjects will tend to select ratings in the earlier or left-hand portion of the scale.

H3: Context Effect - The higher the ratings of adjective pairs appearing before a given adjective pair the lower the rating of the given adjective pair. It is theorized that the level of the anchoring point framework established by earlier ratings will inversely affect subsequent ratings.

This hypothesized context effect is predicated on the idea of earlier ratings establishing a framework of anchoring points. Presumably the more ratings or anchoring points making up this framework, the greater its influence. Thus, ordinal position is seen to interact with the context effect, the latter increasing as a direct function of the former.

#### Analysis

A multiple regression analysis was utilized to test the three hypotheses addressing the three different types of effects. Each adjective pair was analyzed separately for both the test and retest phases yielding 20 distinct analyses. The sequence effect was measured as the ordinal position of the given adjective pair. The pole effect was operationalized as a dummy variable, its value depending on whether the "more similar" scale pole appeared at the left or right. The context effect consisted of two variables. The first reflected the main effect of contextual contamination and was defined to be the average of all ratings preceding the given adjective pair for each individual subject. (It follows that where an adjective pair appeared first no contextual contamination was measureable and these cases were not included in the analyses.) The second variable relating to context effect accommodated its hypothesized interaction with ordinal position. First, the average rating across all adjective pairs and all subjects was subtracted from the "main effect" average described above. This difference, roughly half being negative, was then multiplied by the given adjective pair's ordinal position. This composite variable essentially exaggerates both "high" and "low" contexts as a function of increasing ordinal position. The resulting specified equation, therefore, is

$$\begin{aligned} \text{RATING} = & B_0 + B_1 (\text{ORDINAL POSITION}) \\ & + B_2 (\text{POLE ORIENTATION}) \\ & + B_3 (\text{CONTEXT AVERAGE}) \\ & + B_4 (\text{ORDINAL POSITION})(\text{CONTEXT AVERAGE} - \\ & \text{AVERAGE OF ALL RATINGS}) \end{aligned} \quad (1)$$

for each adjective pair.

The interaction term was dominated by the context effect component. Because of its very high correlation with the main context effect variable, the two are analyzed and interpreted together. The interaction term was not highly correlated with ordinal position (average simple correlation = -.003, average absolute correlation = .113), implying that the latter can safely be considered separately.



Results

H1: Sequence Effect

Joint Effects

Each adjective pair was analyzed separately, as described above, for both the test and retest phases. Thus, each of the three hypotheses is tested some 20 times. Results are presented in Table 2.

The average value of the partial coefficients of determination over the 20 analyses is .017 and none of the 20 coefficients is significant at the .10 level. It is evident that ordinal position per se did not influence subjects' ratings.

TABLE 2  
ADJUSTED COEFFICIENTS OF  
DETERMINATION, PARTIAL COEFFICIENTS OF  
DETERMINATION, AND SIGNIFICANCE

Adjective Pair	Adj. R <sup>2</sup>	TEST		
		Sequence	Pole	Context
1	-.004	.005	.003	.050
2	.139*	.010	.028	.175*
3	.068*	.001	.011	.128*
4	.410*	.000	.020	.440*
5	.020	.005	.005	.077*
6	.040	.013	.013	.087*
7	.286*	.001	.018	.327*
8	.061*	.001	.027	.096*
9	.244*	.008	.008	.270*
10	.177*	.010	0	.224*

H2: Pole Effect

The average value of the partial coefficients of determination over the 20 analyses is .020 and only one of the 20 coefficients is significant at the .10 level (where two would be expected by chance). Clearly, pole orientation of the scales had no material or significant effect on subjects' ratings.

Adjective Pair	Adj. R <sup>2</sup>	RETEST		
		Sequence	Pole	Context
1	.136*	.054	.053	.113*
2	.103*	.008	.022	.111*
3	.135*	0	.020	.186*
4	.230*	.017	.017	.263*
5	.110*	.017	.023	.140*
6	.228*	.092	0	.250*
7	.297*	.008	0	.346*
8	.206*	.016	.030	.240*
9	.361*	.004	.088*	.311*
10	.193*	.072	.005	.186*

H3: Context Effect

As noted earlier, the context effect consists of two variables, a context main effect measure and an interaction with ordinal position, considered together. The average partial coefficient of determination attributable to these two variables over the 20 instances is .201. Of the 20 coefficients, 19 are significant at the .01 level (where two would be expected by chance). Contrary to the findings of Jain and Pinson (1976), the effect of contextual contamination is very pronounced and significant.

Nature of Contextual Contamination

Of the three sources of bias studied, only the contextual effect was significant. To determine the nature or direction of this influence, it is informative to examine the signs of the simple correlations between ratings and the context "main effect" and "interaction effect" variables defined earlier. All 20 of the rating-main effect and all 20 of the rating-interaction effect simple correlations are positive. The clear implication is that contrary to the findings of Ferber (1952) and Landon (1971), the influence of contextual contamination is direct. The higher the ratings given to earlier stimuli, the higher the ratings given to later stimuli.

Discussion

Taken together, the three potential sources of bias studied had a significant and material effect. Considered separately, no evidence of sequence and pole orientation effects was found while contextual contamination was clearly present.

\* = significant at the .10 level

As a descriptive measure of the joint effect of all three types of variables together, adjusted coefficients of determination are presented in Table 2. The average over all 20 instances is .172, indicating a material proportion of variance in ratings can be accounted for by the scale presentation characteristics. Seventeen of the twenty squared correlation coefficients are significant at the .10 level (where two would be expected by chance), indicating that the overall joint effect is significant.

As expected, particularly in light of the fairly short list of adjective pairs, subjects did not systematically increase or decrease ratings of a given adjective pair as a function of its ordinal position. Also as expected, for want of any substantial theoretical or empirical foundation, subjects did not systematically tend to use either the left or right hand portions of the scale. Ratings of earlier stimuli did indeed influence subsequent ratings although in a direction contrary to that expected.

To test for the significance of the three types of effects separately, an F test of the partial correlations of determination (Horton, 1978) was employed.

It is possible that a list of ten stimulus objects is not of great enough length to evoke a bias due to ordinal position. Also, it is possible that randomization mitigates the pole orientation effect although the variable of interest is tendency toward left or right hand portions of the scale, not toward the "more" or "less" extremes.

Within the scope of this research, the consistency of findings across adjective pairs and across test and retest adds to the credibility of the results of this study. That the context effect is so prevalent is all the more noteworthy in that the entire list of adjective pairs was immediately available to subjects. Thus, they were in a position to scan the list, establish extreme stimulus anchoring points, and so on, prior to rating any given adjective pair.

In light of the results of this study, researchers should strongly consider randomizing or otherwise balancing the content of lists of stimulus objects to be rated as to similarity. Or possibly the provision of explicit anchoring stimuli could serve to establish an absolute framework for subjects' ratings.

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MICROCOMPUTER SUPPORT FOR SMALL BUSINESS  
MARKETING INFORMATION AND RESEARCH

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Abstract

It is imperative that small businesses be responsive to changes in the social and economic environment and shifts in consumer demand. This is necessary in order to remain competitive. One method of achieving competitiveness is through the use of microcomputers to access information which can provide management with the ability to make fast and effective decisions. This paper discusses the viability of using microcomputers for small business marketing research and presents two examples demonstrating the practicality of using microcomputers in small businesses.

Introduction

To remain competitive, small businesses must be responsive to changes in the social and economic environment and shifts in consumer demand. The small business manager, therefore, must be skillful in both conceiving and then matching his business to the needs and interests of the consumer. Consequently, a future-oriented manager will be looking for innovative methods of analyzing market opportunities, making short- and long-run decisions regarding the marketing mix, and keeping abreast of current operations.

During the past half-century, large manufacturers, and to some extent, wholesalers and retailers, have viewed market research as an important business activity. As our economy continues to become most dynamic, small business managers are beginning to recognize the existence of problems which can be addressed through marketing research. Forecasts, market potentials, market characteristics, sales analyses, location analyses, and product mixes are just a few of the areas for which marketing research may be of assistance to the small business manager.

Currently, most small business managers develop their "market intelligence" informally due to a lack of "know how" and training in data collection and analysis techniques. (1:264)

Purpose

The basic hypothesis of this paper is that every small business has access to information, which, if properly collected, maintained, analyzed and interpreted, can provide management with information capable of enhancing the effectiveness and efficiency of market opportunity decisions. If the data were stored within a microcomputer data base, the data could be accessed and analyzed rather routinely via appropriate and useful statistical techniques. Furthermore, this extension of computer application beyond the accounting or bookkeeping function can serve as additional economic justification for the acquisition of a microcomputer system by small firms.

The remainder of this paper will discuss the viability of using microcomputers for small business marketing research. Included in the forthcoming discussion are "real world" case examples demonstrating the practicality

of using microcomputers in small business.

The Computer and Small Business

It is only within the past few years that the small business could even consider the question of acquiring a computer system. Impressive developments in microcomputer technology have brought about a major revolution in small, powerful, and affordable computers. The cost of mini- and micro-circuiting has decreased from roughly \$16 per integrated circuit chip in 1964 to 15 cents per chip in 1978 and is predicted to drop to one cent per chip by 1985. During roughly this same time period, the maximum number of binary digits per large scale memory chip has increased over 500 times. (3:65)

Microcomputers are available which have more memory and computing capacity than the first large electronic computer (ENIAC), are twenty times faster, a thousand times more reliable, occupy 1/30,000th of the volume, consume the power of a light bulb rather than that of a locomotive, and cost 1/10,000 as much, or less than \$400. (3:66)

It is obvious that the small computer has had a tremendous effect on the field of computing and offers the potential for significant impact on the small businessman. With a modest capital outlay, the small businessman can have comparable computing power and capabilities before only available on large-scale systems.

One of the major areas to consider in the acquisition of a computer is the type of applications which can be implemented via the computer. Unfortunately, many businessmen inexperienced in the use of computers only think of it being used for bookkeeping and accounting functions. There are, of course, many other applications to which computers may be applied for the purpose of aiding management in making decisions. The small computer which handles accounting functions, inventory control, and order entry/invoicing can be used for sales analysis and sales forecasts, provide information regarding product mix decisions, and/or act as an on-line data base of producer/company/customer information, to name a few "other" applications.

The computer has the capability of becoming what Kotler has described as the "marketing nerve center" for the firm. It can provide instantaneous information and develop analytical and decision aids for management, using data from orders, sales, inventory levels, receivables, payables, and so on. The computer system can also store, search, and process information about the firm's environment developed from sales representatives, call books, specialized marketing research services, or other intelligence sources. Together, this internal data regarding "results" and external data concerning "happenings" can become the organization's marketing intelligence system. (2:606)

The Research Problem

Managers of small firms are often aware that market research can be expensive. They have likely been

exposed to consultants' fees which, to them, appear to be exorbitant. However, these managers are often unaware of the possibilities for profit inherent in the use of market research information. In some cases, it is possible that managers simply do not recognize the existence of problems which justify the use of market research on the computer. In other cases, the small business manager may be future-oriented and dynamically innovative. In both cases, they are likely to be searching for ways to improve decisions and overcome their lack of "know how."

One solution to their problems is the establishment of a formalized means of acquiring information to assist in making market decisions. This is essentially having the capability of generating needed information at the right time. Special attention is given here to the concept of a microcomputer-based and assisted market information system which is assigned the task of generating effective data for decisions. Additionally, it is felt that such a procedure will enhance the utilization and, therefore, cost justification of the computer for small business.

#### The Research Process

Since every problem in business exists within the context of the characteristics of the company and the market, related factors individually and collectively affect the outcome of decisions. Managers, therefore, need to identify and receive information concerning these relevant factors.

All businesses generate data in the form of bits and pieces which often overwhelm decision makers. It is necessary, therefore, to address this problem with regard to the pervasive and even subtle interrelationship of the parts to the whole. In other words, managers or decision makers must address appropriate questions and understand that all businesses have certain key variables and relationships which are important to the success of the organization.

Appropriate research questions can be developed which are exploratory and/or descriptive. For example, cyclical and seasonal trends can be classified and summarized to generate additional information regarding inventory allocation and control. Some small firms currently use "intelligent" cash registers which record sales frequency by item for inventory and labor allocation purposes. Casual designs, which deal with problems such as price sensitivity, advertising effort, and demographic associations, are also possible.

A secondary source for, and means to, acquiring market information is sales, cost, and inventory data compiled in the normal accounting cycle. This data is particularly appropriate to assessing the firm's competitive position and evaluating past strategy. It is readily available and inexpensive when stored within a computer based system, and can serve as a foundation for planning future decisions. When maintained in appropriate form, internal data can be used to analyze a firm's sales performance by customer, channel, product, etc., and determine the profitability of these segments. (3:26)

External primary and secondary data records also can be recorded on computer-based systems for quick access. Several standardized marketing information sources and index data are available for different industries. These data sometimes can be expensive and may not suit the problem perfectly. It is unlikely that the average small business will collect and store other primary

data except on a very limited basis.

Beyond the advantages of data storage and availability, the computer offers considerable support in data analysis. Editing, coding, and tabulation procedures are easily accomplished by the computer and many specific statistical techniques which help obtain meaning from collected data can be employed.

#### Case Examples

The following studies are summarized--not as examples of "ideal" or absolute models of small business computer-based systems, but simply as examples with which the authors have some familiarity.

##### Case I: Handy Hardware

A retail hardware store located in a small town in central Texas was owned and managed by a young man who inherited the business from his father. The new owner, although an Industrial Arts major in college, had taken enough business courses to understand how a microcomputer might aid him in inventory control and purchasing.

He purchased a microcomputer and printer for approximately \$2,000 and learned to program in BASIC. With some programming ability, he began to develop a computer-based inventory system using cassette tapes for storage. Realizing the limitations of this system, but also its potential, he invested another \$1,500 in disk capability. Approximately one year later, working evenings, and with the aid of minimal consulting help, the owner had developed a system which was updated daily (weekly for some articles) that maintained approximately 2,000 different items in inventory. The items were keyed to manufacturers' codes and were, therefore, consistent with microfiche "look-up" used for special items not stocked in inventory. Items were also stored with supplier codes and appropriate lead times for ordering.

At first, the owner checked usage by visually scanning inventory data. Later, however, he created a sales summary divided into categories by item classification and profit percentage. He discovered, for example, that of the eight hand saws he stocked, only three were being purchased regularly. He now stocks those three and has cost and purchasing information readily available for special orders on the others on microfiche. He has discontinued approximately 20-25% of the items he stocked two years ago. These items are being replaced by "what the customer asks for" and "hot items" recommended by suppliers directly or at product shows. The staff has doubled (from three on duty to six), profits are up, and the classic hardware line has expanded into housewares, do-it-yourself, and even limited lumber and building products. Through the use of better and more timely sales, cost, and market information, Handy Hardware serves the needs of more customers more effectively and efficiently than ever before.

##### Case II: Bonus Builders

Bonus Builders, located in Little Rock, Arkansas, has seen the advantages of a microcomputer system in home construction, cost estimation, and bookkeeping. The computer is a tremendous aid in foundation and structural material need and cost estimating. It can also compute wall and truss specifications which are prefabricated and transported to the building site (as opposed to the typical on-site measurement and construction) which has cut labor costs dramatically.

Perhaps the most interesting use for the computer which Bonus Builders is developing at the moment deals with consumer information. Consumer information, in this case, takes two forms. The first includes information for buyers of custom and presold houses. Available options and cost data will be maintained for fixtures, appliances, etc., selected by individual buyers. Buyers can be provided with a list of dollar allowances by category, suppliers' addresses, and room dimensions or requirements (for wallpaper, flooring, etc.). As choices are made, these can be entered on each buyer's file for construction and installation purposes. Allowances are also adjusted to show remaining amounts.

A second area Bonus Builders intends to pursue includes information about consumer tastes and preferences in home design, features, and construction. This information is available from national and local organizations. As well, previous customers' records provide specific information concerning local market tastes, preferences, and availabilities. This information can help the builder design, build, and decorate speculative houses which customers will prefer and will buy.

The net effect of this system should provide the home buyer with a house designed to suit his/her taste at a reasonable cost savings due to more efficient methods and fewer errors, again brought about by better and more timely sales cost, and market information.

#### Limitations

Although the two "real world" case examples present an attractive validation of our point of view, there is a major limitation to computer-based research for small business--software development.

The BASIC language is available on virtually all microprocessor systems. FORTRAN has also been implemented on some small computers, and there seems to be a growing trend to make COBOL and RPG available on some larger microcomputer systems. The problem, however, is not with language used. The software development problem relates to the programs or specific instructions required to retrieve and analyze data when standard "packaged" or "canned programs" are unavailable or inappropriate.

It is unrealistic to rely on computer vendors for software support beyond "canned" programs they sell. The vendors, especially microcomputer vendors, are in the business of selling computer hardware. If the small business does not have qualified programming support, a reputable consultant should be considered. Reliability and maintenance availability are also factors to be considered when the firm selects computer hardware.

These limitations need to be considered, but, in our opinion, do not offset the advantages in a micro-based support system, due to the profit possibilities inherent in the use of marketing research information.

#### Summary and Recommendations

The small business manager, who is looking for innovative methods to analyze market opportunities, make short- and long-run decisions regarding marketing mix, and keep abreast of current operations, may wish to consider the market research potential of a microcomputer system.

Technological development has brought about a major

revolution in small, powerful, and affordable computer systems. Such a system will allow small firms to develop their "market intelligence" formally through appropriate data collection and analysis techniques, as can be seen from the above cases.

Once established, the system can use sales records, cost data, credit information, demographics, market information, etc., to aid management in assessing the firm's competitive position, evaluate past strategy, and make future planning decisions. Support is provided through data storage and analysis capability.

Software development poses the greatest limitation to the use of computer-assisted market research for small business. This limitation, however, does not terminate the consideration of a microcomputer-based support system due to the market opportunity and profit possibilities inherent in the use of market research information.

We recommend that small business managers contemplating the acquisition of a microcomputer system consider the market information and application described herein. We feel that such an application will not only aid in the justification of the computer system, but, ultimately, can result in better and more timely business decisions.

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A LONGITUDINAL STUDY OF THE STABILITY  
OF PSYCHOGRAPHIC DIMENSIONS

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Abstract

The purpose of the study was to provide a longitudinal analysis of the reliability of psychographic items. The results suggest that respondents' answers may vary over a period of time. The most stable dimensions appear to be related to the individual's self concept.

Introduction

Throughout the continuing development of psychographic items, new applications have been made in the consumer behavior discipline. The earliest psychographic research techniques were crude measures of new product proneness. Later efforts were aimed at identifying, measuring, and describing market segments (Demby, 1974). Perhaps the most abundant use of psychographics is in media research. By viewing media as products, lifestyle analysis has been used in developing, segmenting, positioning, and promoting television programs, newspapers, and magazines in a manner that is similar to the merchandising of products, services, and brands (Wells, 1974). Psychographics have also been used to describe the users of products. This enables advertisers to develop a more effective promotional strategy which benefits the seriousness, authoritativeness, and timeliness of the advertising copy (Plummer, 1974).

Although psychographics have been used in many ways to aid practitioners in describing and identifying consumers, several criticisms have been made of the reliability of psychographics. The reliability of homemade scales ranges from .3 to above .8, while multi-item scales range from .65 to .89. Standardized psychographic scales have the highest reliability with a range of .70 to .90 (Goldberg, 1976).

Previous studies have applied reliability analysis at the aggregate and individual levels. In general the group responses are higher than individual responses. The aggregate responses appear to be more useful to marketing practitioners since marketing strategies usually are designed for identifying differences, such as market segments. Other researchers have focused on the individual reliability level, and are concerned with the presence of stochastic responses. The reliability of the items being measured may also be affected by "real changes" in the individual occurring between tests.

In light of the questions raised about the reliability of psychographics, a longitudinal study was undertaken by Burns and Harrison (1979) that sought to measure the stability of the 36 psychographic items obtained from a list of items composed by Wells and Tigert (1971). The items were tested over a two phase period to determine those characteristics that were stable and enduring, as well as characteristics that were less stable and subject to external influence. The study also investigated the aggregate and individual level reliability of psychographic item responses on the more stable and lasting psychographic dimensions.

The results of the study indicated that the aggregate analysis of the mean responses exhibited very little differentiation across all psychographic items; the largest difference was .38. The correlation coefficient of the two mean vectors was .97, revealing a very high reliability on the aggregate basis of the 36 items. On an item by item basis, the correlation values were much lower, ranging from .23 to .80; the median value was approximately .58. Perfectly consistent responses ranged from 31.0 to 61.9 percent, with a median of 44 percent. In all cases, the majority of the respondents varied by only one response category or less. In determining individual differences, a subject-by-subject analysis revealed that 61 percent of the respondents exhibited correlations of .70 or greater. This result suggested that the respondents gave similar, although not identical responses.

Factor analysis was applied to the 36 items. One set of eighteen items was found to be unstable characteristics with questionable construct validity. A second set of six psychographic items appeared to be stable, but showed real changes in the respondents over the one year time interval. The third set of remaining psychographic items were identified as stable psychographic dimensions which were more enduring personality or value-oriented characteristics. Although twelve stable psychographic items had the reliability of .67 or greater, the items had low internal consistency. The items ranged from .42 to .48 for 1977 and .44 to .49 for 1978.

Purpose of the Study

The purpose of this study was to provide a longitudinal analysis of the reliability of psychographic items. To the extent possible, the data analysis included a replication of the reliability tests of the 1976/1977 data reported by Burns and Harrison (1979). Based on these considerations, the objectives of the study were:

1. To assess the stability of the psychographic dimensions over a three phase study.
2. To distinguish between the standard psychographic items which are more lasting or enduring and those that are more temporary or unstable.
3. To investigate the aggregate and individual reliability of psychographic responses of the more stable or lasting psychographic items determined in the previous study.

Method and Sample

Data for the study were collected from female heads of households through the use of self-administered questionnaires. The study was conducted in three phases, approximately one year apart. The first phase was completed in October, 1976, and the third in October, 1978. In each phase the identical questionnaire was used. The survey was conducted in a geographically well-defined subdivision of Baton Rouge, Louisiana. Thirty-six women participated in all three phases of the study. Due to the high mobility of the subdivision residents, the researchers were unable to include all of the 64 women that had participated in the two



previous phases. The questionnaire contained 36 psychographic items shown in Figure 1, demographic data, and questions concerning the respondents' store patronage and communication behavior. The respondents were asked to rate themselves on each psychographic item on a six point agreement-disagreement scale.

FIGURE 1  
THE 36 PSYCHOGRAPHIC ITEMS USED IN THE STUDY

Item Number	Psychographic Statement
1.	I often watch the newspaper advertisements for announcements of department store sales.
2.	I like to watch or listen to baseball or football games.
3.	I often try new stores before my friends and neighbors.
4.	I like to work on community projects.
5.	My children are the most important thing in my life.
6.	I will probably have more money to spend next year than I have now.
7.	I often seek out the advice of my friends regarding which store to buy from.
8.	I think I have more self-confidence than most people.
9.	I enjoy going to symphony concerts.
10.	It is good to have charge accounts.
11.	I enjoy participating in sports like golf or tennis.
12.	I must admit that I really don't like house cleaning.
13.	I usually have one or more outfits that are of the very latest style.
14.	No matter how fast our income goes up, we never seem to get ahead.
15.	I usually read the sports page in the daily paper.
16.	I'd like to spend a year in a foreign city.
17.	I am uncomfortable when my house is not completely clean.
18.	A person can save a lot of money by shopping around for bargains.
19.	I am more independent than most people.
20.	I try to arrange my home furnishings for my children's convenience.
21.	When I hear about a new store, I often visit it just to see what it's like.
22.	I enjoy going through an art gallery.
23.	My friends or neighbors often ask my opinions about stores.
24.	I would like to take a trip around the world.
25.	I like to pay cash for everything I buy.
26.	I participate in sports activities regularly.
27.	When I must choose between the two, I usually dress for comfort, not style.
28.	Our days follow a definite routine, such as eating meals at a regular time, etc.
29.	I sometimes influence which stores my friends buy from.
30.	I enjoy vacuuming and dusting the house.
31.	I would rather spend a quiet evening at home than go out to a party.
32.	I enjoy volunteer work for a hospital or service organization on a fairly regular basis.
33.	Our family income is high enough to satisfy nearly all our important desires.
34.	My neighbors and friends usually give me advice on which stores to use.
35.	Five years from now the family income will probably be a lot higher than it is now.
36.	I would prefer to see a play on TV than attend that play at a theater.

## Results

Before analysis was begun on the 36 respondents that took part in all three phases, t-tests were undertaken to compare the women that had not taken part in the third phase. T-tests were performed for the 1976 and 1977 phases to detect possible significant differences in the responses to the psychographic items. The t-tests revealed significant differences at the .05 level in only two items (item numbers 31 and 24). Thus, it was concluded that the 36 women that took part in the third phase were not a unique subsample of the study.

### Mean Responses, Deviations in Mean Responses and ANOVA of Responses

Preliminary aggregate inspection of the data involved a pretest and posttest computation of the mean response of each psychographic item for the years 1976, 1977, and 1978. The items exhibited differences ranging from 0-.68 for the 1976/1977 period, 0-.65 for the 1976/1978 period and 0-.65 for the 1977/1978 period. The items that exhibited the largest mean differences were items 7, 14, 16, and 31; all of these items had a mean difference of .6 or greater for at least one phase comparison. A one-way ANOVA was performed to detect the presence of significant differences in the mean response to the 36 psychographic items over the three phases. The results of the analysis disclosed that significant differences in the mean response to items 7 and 14 at the .05 level of significance were present. Thus, at the aggregate level the respondents' responses to the items were fairly consistent over the three year period.

### Mean Vector Correlations

The vectors of the mean responses of the three phases indicated a very high reliability. The test-retest product moment correlation coefficient was .92 for the 1976/1977 period, .93 for the 1976/1978 period and .94 for the 1977/1978 period. In general, the respondents on an aggregate basis responded very closely to the same responses for each phase.

### Item by Item Subject Correlations

The responses were also compared on an item-by-item basis with the computation of a correlation coefficient of each respondent's 1976 response matched with her 1977 and 1978 response, as well as her 1977 response matched with her 1978 response. The correlation values for the 1976/1977 comparison ranged from .12 (item #6) to .63 (#13), and from -.06 (#6) to a value of .53 (#11) for the 1976/1978 comparison. For the 1977/1978 interval, the values varied from -.01 (#7) and .59 for (#2). A review of the item by item correlations reveals large differences in variation in the correlation values of the 36 items. The presence of negative and very low correlation values indicated the high instability of some of the items.

### Absolute Mean Differences in Each Respondent's Responses

In order to better understand the consistency of the respondent's responses on an aggregate and individual basis two further analyses were performed. The absolute value of the difference of each respondent's response to the 39 items for each of the three time interval comparisons were summed for each of the three time interval comparisons, and the mean value of the deviation for each of the 36 psychographic items for each time interval was computed. In the majority of the cases the respondents varied in absolute differences by at least one response category for each of the

phase comparisons studied. The response to items #19, 22, 23, 31, and 33 had the least variability in response. Although the mean values of the subjects' responses were greater than 1.0, almost every item varied by less than 1.35. The smaller sample size may have resulted in the larger change in the subjects' responses. In the previous study the majority of the respondents varied by less than one response category. An alternative explanation for the deviations may be that the characteristics are, in fact, very unstable or temporary for many of the items, as well as unreliable.

The subjects' responses were compared for the three phase period to determine the percentage of perfectly consistent responses, as well as the number of respondents that varied by only one response category. For the three phase period, item #1 had the highest perfectly consistent response with 41.6 percent and items 25 and 29 had the lowest with 5.6 percent perfectly consistent responses. In the 1976/1977 time interval, items #1 and #30 had the highest consistency (50.0%) and item #12 the lowest (8.3%). Similarly, in the 1976/1978 period, item #1 had a 66.6 percent perfect consistency and item #12 had a low of 11.1 percent. The 1977/1978 consistency in responses ranged from 52.8 percent for item #12 to 16.7 percent for item #29. In regard to the time interval with the highest consistency of perfect responses, overall the 1977/1978 comparison of responses had the highest consistency. Items 7, 9, 10, 15, 17, 27, and 30 had slightly higher perfectly consistent responses in the 1976/1977 time interval and items 1 and 3 had a higher rate of consistency in the comparison of the 1976/1978 responses. The majority of the respondents varied by more than one response category in the three phase study, as well as in each time interval comparison. These results indicate that responses to psychographic items may shift over the three phase study on an aggregate and individual basis. When analyzed on an interval basis of two phases, the majority of the respondents answered in a perfectly consistent manner or within one time interval for the 1976/1977, 1976/1978, and 1977/1978 time period. It appears that although a large number of respondents did not answer perfectly consistently for three phases, the majority did answer consistently in two phase comparisons.

#### Sum Score Reliability

In the previous study by Burns and Harrison, nine factors were extracted from the 36 items that had a reliability of .67 or better and eigen values greater than 1.0. The items accounted for greater than 75 percent of the variance in the 1976 and 1977 responses. During the third phase of the study, 36 women completed the questionnaire. The number of respondents were too few to replicate the factor analyses performed by the researchers in the previous study. For factor analysis, the sample should include at least 50 observations, and the ratio of observations to the variables analyzed should be at least two-to-one (Hair, 1979). Although factor analyses could not be performed, the sum scores of the previously determined nine psychographic dimensions were analyzed for test-retest reliability coefficients and the internal consistency of the six stable dimensions of .67 reliability and the four stable dimensions of .74 reliability determined in the previous study.

Table 1 presents the reliability coefficients of the psychographic dimensions. The 1977/1978 coefficients were the highest, with four of the nine dimensions having a reliability coefficient of .55 or greater. In the 1976/1978 comparison, two of the dimensions were at the .54 reliability level. The lowest

reliabilities were in the 1976/1977 analysis. Only one dimension, sports spectator, was reliable at the .59 level. Overall, the reliability coefficients of the 1977/1978 responses were higher than the 1976/1977 or 1976/1978 responses. Although the patterns of responses differ, it appears that some learning may have taken place between the second and third phase. The dimensions seem to form a continuum with items varying in reliability over the three phase study. The dimensions of sports spectator and sports participant appear to be the most stable characteristics; they displayed the least variability in coefficients during the phases and relatively high reliability. The dimensions of compulsive housekeeper and new store trier seemed to exhibit moderately high reliability to a higher reliability in the last phase of the study. The dimensions of credit user, financial optimist, trip taker, and child oriented appear to be the most unstable and unreliable dimensions.

TABLE 1  
STABLE PSYCHOGRAPHIC DIMENSIONS RELIABILITY  
COEFFICIENTS BY PHASES

Dimension/Factor	1976/1977 Sum Score Reliability	1976/1978 Sum Score Reliability	1977/1978 Sum Score Reliability
Compulsive Housekeeper (items 12 and 30)	.41	.34	.78
New Store Trier (items 3 and 21)	.36	.28	.64
Sports Spectator (items 2 and 15)	.59	.54	.58
Child Centered (items 5 and 20)	.30	-.05	.47
Self-confident (items 8 and 19)	.32	.17	.51
Credit User (items 10 and 25)	.34	-.06	.25
Financial Optimist (items 6 and 35)	.09	.11	.31
Sports Participant (items 11 and 26)	.38	.51	.55
Trip Taker (items 16 and 24)	.19	.34	.32

#### Internal Consistency

Internal consistency reliability was determined through a two-way analysis of variance. The purpose of the analysis was to isolate the two main sources of variation attributed to the stable dimensions that are less indicative of real changes and the variation that may be attributed to the individual differences of the respondents. Analyses were performed for each year and for the two groups of psychographic dimensions that were tested in the previous study. Only these factors were chosen in order to replicate the previous study. The internal consistency for the first group (those dimensions that had a reliability of .74 or greater in the previous study) was .47 in 1976, .53 in 1977, and .41 for 1978. The results for the second group (those dimensions with reliabilities of .67 or greater) were .53, .55, and .53 for 1976, 1977, and 1978 respectively. Although the reliability of the respondents' responses was not high, it appears that the internal consistency of the six dimensions was slightly higher than for the four dimensions. The reliability of the six and four dimensions was slightly higher in the three phase study than in the two year study. This may be due to the respondents that took part in the third phase having a slightly higher number of consistent responses. A review of the three phases of the consistency tests indicates that the 1977 responses had higher internal consistency than the 1976 or 1978 responses. The large amount of stochastic response that

was present in each year that was not reflective of real changes in the respondents does not allow the researcher to place great confidence in the reliability of the respondents' answers.

#### Subject-by-Subject Retest Correlations

The analysis pursued the individual differences further with a subject-by-subject analysis comparing each subject's vector of 12 responses to her matched post-test responses for the items composing the six psychographic dimensions defining more lasting personal characteristics. The distribution of the results are in Table 2. Approximately 50 percent of the respondents exhibited correlations of .60 or greater. This low reliability does not indicate a high similarity of responses to the stable dimensions by the respondents. The 36 items of the study were analyzed. Over 60 percent of the respondents exhibited a .60 or greater reliability for each of the three phase comparisons. The correlations of the 36 items were greater than the correlations of the 12 stable items. This result indicates that the previously determined stable items may not be as reliable as indicated in the 1976/1977 study.

TABLE 2

DISTRIBUTION OF TEST RETEST CORRELATION FOR EACH SUBJECT FOR 12 STABLE PSYCHOGRAPHIC DIMENSIONS

	1976/1977 Percent	Cumu- lative	1976/1978 Percent	Cumu- lative	1977/1978 Percent	Cumu- lative
.90-.100	22.7	22.7	8.3	8.3	19.4	19.4
.80-.89	22.2	44.9	19.4	27.7	19.4	38.8
.70-.79	5.6	50.5	19.4	47.1	00.0	38.8
.60-.61	22.2	72.7	2.7	49.8	11.1	49.9
.50-.51	11.1	83.8	13.8	63.6	13.8	63.7
.40-.41	0.0	83.8	16.6	80.2	5.6	69.3
.30-.31	2.7	86.5	91.3	85.8	2.7	72.0
.20-.21	5.6	92.1	2.7	88.5	8.3	80.3
.10-.19	2.7	94.8	5.6	94.1	8.3	88.6
.00-.09	0.0	94.8	5.6	100.0	11.1	100.0

#### Discussion

The results of the study indicate that the reliability of psychographic items may be very low, and somewhat unstable. The six stable dimensions previously determined in the 1976/1977 study did not reflect a large amount of similarity in the third phase of the study. The dimensions varied greatly over the three phases. The significantly greater reliability of the third phase comparison of 1977/1978 indicated that learning may have taken place. The higher internal consistency of the items also suggest the presence or possibility of learning. The low test-retest reliability of the 12 stable item correlations were also weak, and the absolute mean deviations were large. These two results indicate that the items were not as stable as previously determined.

In conclusion, the results of this study suggest that respondents' answers to psychographic items may vary over a period of years. The specific dimensions that appeared to be the most unstable were: credit user, financial optimist, trip taker, and child orientation. Perhaps socio-economic changes, career changes or other external factors caused these shifts. Interestingly, the dimensions which appear to be linked with the individual's self concept were the most stable. These dimensions included sports participant, sports spectator, compulsive housekeeper and newstore trier. Additional research is needed to determine the factors that influence the stability of psychographic dimensions.

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Abstract

The objective of this research is to review the cross-cultural studies of the quality perceptions of American versus foreign products, over time, to explain the growth of foreign car sales at the expense of domestic car sales in the U.S. Three recent studies (Rogers National Research, Inc., 1979; Miaoulis, et al., 1980; and Powers, 1980) were reviewed in which American consumers compared the characteristics of U.S., Japanese, and German made cars. The general findings were that Japanese and German cars were viewed as more reliable and better overall than American made cars; foreign cars were in better condition at delivery from dealers; and new foreign car owners reported fewer mechanical problems.

Two studies (Lillis, et al., 1974; Cattin and Jolibert, 1979) examined the change in perception of U.S. consumers toward American, Japanese, and German products, in general, over time. Americans initially viewed U.S. goods as being of better quality than Japanese goods. As time progressed, Americans viewed the quality of Japanese goods as being better than American goods.

A study of the change in the perceptions of Japanese businessmen toward American, Japanese and German made products over time was reviewed (Nagashima, 1977). The Japanese perceptions of the country which produces the automobile of greatest value changed, with their opinion of U.S. autos declining drastically and those of Germany and Japan improving. In conclusion, it appears that the reliability-workmanship factor is a dominant factor influencing the purchase decision in the world market.

1. Objective and Background

The purpose of this study is to review the consumer research literature on the cross-cultural quality perceptions of American versus foreign products, over time, to gain insight into the explanations for the growth of imported car sales in the U.S. Recently, the growth of import car sales, a record 2.3 million cars in 1979 (Bennett, 1980) and the \$31 billion deficit balance-of-payments in 1977 alone (Sternitzke, 1979), has resulted in a need to determine the effect that the perceived and/or real quality of American products vis-a-vis foreign competition has had on the U.S. balance of trade and the domestic auto problem.

Two explanations have been offered regarding the decline of both domestic auto and U.S. export sales. One explanation is that American businesses have failed to remain competitive with their foreign counterparts. Accordingly, shifts toward foreign products have resulted because the relative quality, delivery time, price, and overall confidence of foreign products have become more favorable than those of their American counterpart. In the case of automobiles, for example, the rise of import sales would be due to the relative increase in the quality of imported autos compared to that of the domestics.

The other explanation is that American products have concentrated in either "stagnant or declining product lines" (Sternitzke, 1979:25). According to this structural view, the foreign competitors would be more in tune with the market requirements of consumers than their American counterparts. In the case of autos, for

example, the American demand for fuel efficient small cars would be filled by imports if the domestic manufacturers did not satisfy the demand.

The balance-of-trade deficits that the U.S. has been experiencing lately appear to be due to the lack of competitiveness of American products with foreign products, rather than to the structural insufficiencies of American businesses (Sternitzke, 1979). The particular problem with the domestic auto market is not as easy to categorize. Both the structural and competitive explanations appear applicable to the domestic auto problem. Honomichl (1980:44), after interviewing a number of auto executives who had held key positions in the U.S. auto industry during the 1950s, 1960s and 1970s, wrote that Detroit's top management viewed "the small car market... as a fringe market, not the core of consumer demand." American small cars were also viewed as inferior (Honomichl, 1980:44):

"American made cars didn't compare well with imports in terms of quality construction and, in some instances, styling. Detroit was selling 'small' per se while imports were selling economy of operation, low maintenance, and dependability."

While recognizing the importance of the structural argument in the decline of U.S. domestic auto sales, the concentration of this paper is on the quality argument. Three recent studies comparing American and foreign reliability and workmanship characteristics, therefore, are examined and reviewed in the second section.

A number of consumer studies comparing the perceptions that Americans have had toward the products produced in the U.S. with those produced in the major competitive countries (Japan and West Germany) have appeared from time to time, measuring the images of products along a number of dimensions. The research instruments and the sampling techniques employed in many of these studies make timed comparisons difficult, but two studies were found in which the change in the perceptions of U.S., Japanese, and German goods, in general, by Americans can be measured over time. Specific analysis of the opinions toward autos was not covered in these studies, but since autos are a major purchase item for Americans, these general studies should indirectly measure the perceptions toward autos. The results of the perceptual change of Americans toward various countries' products over time is covered in the third section. Since change in the perception of U.S. autos by the foreign market is related to the U.S. balance of trade and consequently to the U.S. economy, research on the perceptual change by the foreign consumer toward American products is reviewed in the fourth section.

2. Studies of Americans' Perceptions of U.S. Versus Imported Autos

The quality and reliability images of U.S. autos compared to imported autos have become important recently in explaining the growing share of import auto sales in the U.S. The more recent studies of consumers indicate that cars from West Germany and Japan are viewed as more reliable and better overall than American made



cars (Miaoulis, et al., 1980). They are viewed as being in better condition at delivery from dealers (Rogers National Research, Inc., 1979), and import new car owners report fewer mechanical problems than domestic new car owners (Powers, 1980). In the Miaoulis, et al., (1980) study, a screened population of 766 persons from a randomly selected, cross-sectional sample of 1,000 households in the Dayton, Ohio, SMSA were asked their perceptions of U.S. versus imported subcompact automobiles in January 1980. Both the subset that had purchased a subcompact in the past two years (N=208) and those that had not (N=558) indicated that the "most reliable" and the "best overall" subcompacts came from outside the U.S. (see Tables 1 and 2). Only one-fifth of those polled indicated that the U.S. produced the best subcompact.

TABLE 1

MOST RELIABLE SUBCOMPACT AUTOMOBILE BY COUNTRY

Country	Total Sample %	Purchased Past 2 Years	
		Yes %	No %
West Germany	36.0	33.9	37.0
Japan	33.0	36.0	31.6
United States	21.5	23.8	20.5
Sweden	5.2	3.7	5.8
England	1.6	1.1	1.9
France	0.8	0.5	0.9
Italy	0.8	0.5	0.9
All other	1.1	0.5	1.4
Sample Size	766	208	558

SOURCE: Miaoulis (1980).

TABLE 2

BEST OVERALL SUBCOMPACT AUTOMOBILE BY COUNTRY

Country	Total Sample %	Purchased Past 2 Years	
		Yes %	No %
West Germany	35.2	34.6	35.5
Japan	34.9	40.4	32.5
United States	20.3	17.0	21.7
Sweden	5.0	4.8	3.7
England	1.6	1.6	1.6
Italy	1.3	1.1	1.4
France	0.6	0.5	0.7
All other	1.1	-	2.9
Sample Size	766	208	558

SOURCE: Miaoulis (1980).

To determine the factors that were related to their purchase decision, the most recent purchasers of subcompacts were asked to rank the seven countries from best (1) to worst (7) on each of thirty (30) characteristics defined as elements of the purchase decision. Multidimensional scaling analyses were presented only for subcompacts from the U.S., Japan, and West Germany. Generally, U.S. subcompacts received high rankings on availability of parts and options and low cost of repair and maintenance, but low rankings on value, workmanship, and gasoline mileage (see Table 3). Subcompacts from Japan and West Germany, in general, received high rankings where the U.S. received low rankings and vice versa (See Table 3).

TABLE 3

THE HIGHEST AND LOWEST RANKINGS OF SUBCOMPACTS BY COUNTRY OF MANUFACTURING (Multidimensional Scaling Results)

Country	Highest	Lowest
U.S.	Availability of parts and options front seat comfort overall interior roominess overall crash protection quality of optional equipment quality of ventilation system low cost of maintenance and repair	best gasoline mileage maintenance, resale value least expectance of first year repairs least likelihood of recall quality of workmanship quality of engine
Japan	best gasoline mileage best value for the money least likelihood of recall maintaining resale value quality of workmanship quality of engine engineering excellence	availability of parts and options overall crash protection quality of optional equipment overall interior roominess low cost of maintenance and repair
W. Germany	quality of workmanship quality of engine overall mechanical quality least likelihood of recall maintaining resale value best gasoline mileage	availability of parts and options quality of optional equipment quality of ventilation system overall interior quietness overall exterior styling

SOURCE: Miaoulis (1980).

Miaoulis, et al. (1980:10) concluded from their research that "product reliability and quality are among the powerful determinants in the consumer's purchase decision process" toward subcompacts in this country. Furthermore, they state that the survival of this country's automotive industry is dependent on understanding the role of consumers' perception toward automobile quality/reliability and responding to those perceptions.

Broader support of the quality argument is provided by examining the Rogers National Research, Inc. (1979) study of approximately 36,000 buyers of new 1979 model year cars. Owners of subcompacts through luxury models (domestic and import) were asked to rate their new cars along a five-point scale from poor (1) to excellent (5) according to a number of factors. The average rating of domestic and import owners for the various size classes of autos is listed in Table 4.

The owners of imports in each size class rated their cars higher than domestic owners in "overall opinion of their new car," "value for the money," "condition of car when delivered," "quality of dealer service," and "reliable trouble-free operation." Thus, the same quality/reliability factors that were identified as

TABLE 4

AVERAGE RATING\* OF NEW 1979 MODEL YEAR CARS ALONG  
A NUMBER OF AUTO-RELATED FACTORS

Make of New Car Purchased	Overall Opinion of New Car	Value for Money	Condition of Car When Delivered To You	Quality of Dealer Service	Reliable Trouble-free Operation	Overall Interior Roominess
Subcompact						
Domestic	3.62	3.65	3.52	3.19	3.56	3.36
Captive Imports	4.06	3.93	3.82	3.25	3.92	3.55
Imports	4.26	4.14	4.22	3.58	4.21	3.61
Small Specialty						
Domestic	3.68	3.40	3.41	3.14	3.64	3.23
Captive Imports	4.07	3.78	3.76	3.16	4.21	3.57
Imports	4.28	4.03	4.15	3.52	4.26	3.54
Compact						
Low Price (dom)	3.51	3.24	3.35	3.19	3.47	3.74
Medium Price (dom)	3.51	3.21	3.33	3.16	3.44	3.58
Imports	4.17	3.90	4.07	3.49	4.19	3.81
Mid-Size						
Domestic	3.62	3.29	3.50	3.30	3.68	3.76
Imports	4.33	4.26	4.27	3.58	4.32	4.34
Specialty (dom)	3.77	3.43	3.62	3.34	3.82	3.77
Standard						
Low Price (dom)	3.75	3.38	3.56	3.44	3.86	4.15
Med. Price (dom)	3.87	3.43	3.67	3.57	3.91	4.13
Luxury						
Domestic	4.06	3.59	3.81	3.60	4.06	4.19
Imports	4.54	4.20	4.48	3.87	4.50	4.10

SOURCE: Rogers (1979).

\*RATINGS: From Poor (1) to Excellent (5).

affecting the purchase decisions of subcompact owners in the Miaoulis, et al. (1980) study were identified as differentiating domestics from imports across all size classes in the Rogers National Research, Inc. (1979) study. The quality factor, undoubtedly, contributed to the percentage of 1979 model year owners in the Rogers study who indicated that they would buy the same make and series of car again. A higher percentage of import owners compared to domestic owners in all size classes indicated that they would purchase the same make and series again (see Table 5).

The current comparative impressions that consumers have toward U.S. and foreign made cars have not existed long. A few decades ago, the penetration of import auto sales was miniscule. Although "quality" now appears to be the factor separating U.S. and foreign made cars, in the past, this difference may not have been present. The examination of the "quality" dimension of American versus foreign autos to Americans, over time, should allow us to determine if the impressions of "quality" alone have changed, or if quality has changed with other factors. This examination is covered in the next section.

### 3. Studies of the Change in Perceptions of American, Japanese and German Products by Americans Over Time

The quality perceptions of domestic versus import cars were found to affect the purchase decision of auto owners (see previous section). Consumer research on the effect of price (Jacoby, et al., 1971) and other cues (like brand names, physical characteristics of the product, snob appeal, etc.) (Gardner, 1971; Shapiro, 1973) on quality indicate that the impressions of quality vary according to the presence of other marketing variables. A detailed examination, therefore, of the multiple cues related to a product would allow researchers to identify and understand the cues that are related to a product's quality perceptions. Since the perceptions

TABLE 5

PERCENT OF NEW 1979 MODEL YEAR CAR OWNERS WHO  
INDICATED THEY WOULD BUY SAME MAKE AND SERIES AGAIN

Make of New Car Purchased	% Indicating "Yes"
Subcompact	
Domestic	76.6
Captive Imports	83.9
Imports	91.0
Small Specialty	
Domestic	79.9
Captive Imports	77.6
Imports	85.6
Compact	
Low Price (dom)	92.5
Medium Price (dom)	72.2
Imports	67.4
Specialty (dom)	91.4
Mid-Size	
Domestic	75.3
Imports	94.5
Specialty (dom)	78.2
Standard	
Low Price (dom)	80.1
Medium Price (dom)	83.3
Luxury	
Domestic	86.6
Imports	94.6

SOURCE: Rogers (1979).

of American consumers towards autos explicitly over time have not been researched, an examination of U.S. perceptions toward autos cannot be conducted. But, there have been studies of Americans' perceptions of American products over time which should give an insight into the impression of cars indirectly since they are a major purchase item for most households in the U.S.

Nagashima (1970), in a study of attitudes toward foreign products, identified five dimensions incorporating twenty bipolar variables by which products are judged. The concern in the Nagashima (1970) study was in the reputation and stereotype that consumers attached to products of a specific country. Price and value, service and engineering, advertising and reputation, design and style, and consumers' profile were the five areas in which consumers were asked to judge products on a seven point semantic differential scale from various countries. Lillis, Narayana, and Hallaq (1974) and Cattin and Jolibert (1979) conducted similar studies using the approach outlined by Nagashima that allows for the examination of product perceptual change over time. Since the Lillis, et al. sample was composed of U.S. consumers in the northwest in 1973, and the Cattin and Jolibert sample was composed of U.S. retailers in the midwest, a direct measurement of the average semantic differential scores along the five dimensions from time one to time two was not possible. It was assumed that no regional differences in perceptions toward countries existed between the two studies, and it was assumed that consumers and retailers would evaluate countries



Similarly. The relative change of the respondents toward Japanese and German products, using the perceptions toward American-made products as the base, constituted the data base for the time comparisons.

Table 6 contains the data on the relative changes in the average semantic differential scores toward Japanese and German products for the twenty bipolar variables between 1973 and 1978. The greatest favorable relative change toward Japanese products by Americans indicates an increased perception of reliability, meticulous workmanship, technical advancement, production for world-wide distribution, and pride of ownership. American made goods in 1973 were viewed as more reliable, as having better workmanship, as being more technically advanced and as having a more world-wide distribution than Japanese made products. By 1978, the perception of Japanese products had surpassed that of Americans' in reliability, workmanship, technical advancement, and world-wide distribution.

TABLE 6

RELATIVE SEMANTIC DIFFERENTIAL SCORES OF JAPANESE AND GERMAN COMPARED TO SCORE OF U.S. PRODUCTS BY U.S. CONSUMERS IN 1973 AND 1978

	Relative Semantic Differential Scores					
	Japan/U.S.			German/U.S.		
	1973	1978	% Change	1973	1978	% Change
<b>Price and Value</b>						
inexpensive/expensive	.53	.65	22.6	1.14	1.06	-7.0
reasonably priced/unreas. priced	.67	.66	-.5	1.09	1.12	2.8
reliable/unreliable	1.46	.97	-33.6	.85	.67	-21.2
luxury/necessary	1.10	1.36	23.6	1.01	1.43	41.6
exclusive/common	1.30	1.16	-10.8	.82	.79	-3.8
heavy ind. products/lgt. ind. prod.	1.70	1.54	-9.4	.78	1.00	28.2
<b>Service and Engineering</b>						
good workmanship/not so good work	1.12	.77	-31.3	.79	.56	-29.1
technically advanced/backward	1.34	.99	-26.1	1.44	1.06	-26.4
mass produced/hand made	1.31	1.46	11.5	2.61	1.70	-34.9
world-wide distribution/domestic	1.15	.58	-49.6	1.75	1.06	-39.4
inventive/imitative	1.44	2.20	52.8	1.17	1.05	-10.3
<b>Advertising and Reputation</b>						
pride of ownership/not much pride	1.62	1.17	-27.8	.90	.83	-7.8
much advertising/little advertising	1.64	1.44	-12.2	2.93	2.04	-30.4
recognizable/unrec. brand names	1.65	1.64	-.6	2.78	1.85	-50.3
<b>Design and Style</b>						
variety/limited variety	1.49	2.00	34.2	2.73	2.58	-5.5
concerned w/out appearance/perf.	1.00	1.26	26.0	1.42	1.66	16.9
clever use of color/not clever use	1.14	1.41	23.7	1.57	1.90	21.0
<b>Consumers' Profile</b>						
more for young people/for old	1.15	1.11	-17.8	1.87	1.41	-24.6
more for men/more for women	.98	.74	-24.5	.90	.68	-24.4
upper class/lower class	1.32	1.28	-3.0	.73	1.04	42.5

SOURCE: Computed from Lillis, et al (1974) and Cattin and Jolibert (1979) data.

The largest negative relative change toward Japanese products by Americans indicates a decrease both in inventiveness and in variety of sizes and models compared to U.S. made goods. Americans viewed Japanese products as less inventive and as having less variety in 1973. Thus, there was an increase in these factors between 1973 and 1978.

The largest favorable change of Americans toward German products indicates an increased perception of technical advancement, good workmanship, world-wide distribution, mass production, advertising, and recognizable brand names. American made products in 1973 were perceived as more technically advanced, as having more world-wide distribution, as being less reliable, and as having inferior workmanship than German made goods. By 1978, the perception of American made products was viewed

equally regarding technical advancement, as having equal world-wide distribution, but remaining less reliable, and demonstrating inferior workmanship than German made goods. The largest negative change toward German made products indicates a decrease in the perception that they are luxury items for the upper class.

In summary, Americans have viewed the quality of Japanese goods as improved over time, but they also viewed them as being more imitative and more limited in variety. The most dominant factors in the purchase decision appear to have been the improved value, engineering, and reputation of Japanese goods compared to those from the U.S. The sales of Japanese products have increased even though they have become more imitative and more limited in variety than before. Apparently, the negative perceptions toward Japanese products are not influential enough to overcome the strong workmanship-reliability perceptions that have resulted in the increased sales of Japanese goods.

German made products, which continue to be rated of higher reliability and workmanship than U.S. made products are perceived as having become as technically advanced as American products. The trend toward the purchase of German made products, therefore, is not expected to be halted. Gains in the sales of Japanese and German products at the expense of American goods is likely to continue as long as the reliability-workmanship of American goods is perceived as inferior. The particular case for autos is anticipated to be similar to the situation outlined above, given the quality differences of American, Japanese, and German autos covered in the previous section. Relative price increases of imported cars (increased tariffs, etc.) could have an impact on the relative sales of domestic and imports. But, the strength of the reliability-workmanship factors on purchase behavior indicates that import price increases may not result in the increased buying of U.S. cars.

The analysis of the perceptions toward U.S., Japanese, and German made products, thus far, has concentrated on the perceptions of Americans. In the world market, the perceptions toward the products of this country affect U.S. export sales and, consequently, the U.S. economy. Therefore, the general impressions of consumers outside the U.S. on the quality of U.S. products over time are covered in the next section.

4. A Study of the Change in Perceptions of American, Japanese and German Products by Japanese Businessmen Over Time

Nagashima (1977) replicated a 1967 study of the perceptions of Japanese businessmen toward the products produced in the U.S., Japan, and other countries (Nagashima, 1970) in 1975. The same seven point semantic differential method with five categories was used in both studies, along with the same supplemental questionnaire, which elicited auto-related responses. The relative change in opinions by Japanese businessmen toward U.S., German, and Japanese products between 1967 and 1975 on the twenty items is recorded in Table 7.

The relative change in the impressions towards Japanese and U.S. products between 1967 and 1975 indicated that U.S. products have gained in favorable impressions. In 1973, U.S. products were viewed as more mass produced and more inventive than Japanese products. By 1975, the comparative impression of U.S. products had increased significantly. U.S. products were viewed as more mass produced and more inventive compared to Japanese products than before. Also, the 1973 advantage that Japanese products had over U.S. products as

TABLE 7

RELATIVE SEMANTIC DIFFERENTIAL SCORES OF JAPANESE AND GERMANS, COMPARED TO SCORES OF U.S. PRODUCTS BY JAPANESE CONSUMERS IN 1967 AND 1975

	Relative Semantic Differential Scores					
	Japan/U.S.			German/U.S.		
	1967	1975	Change	1967	1975	Change
<b>Price and Value</b>						
inexpensive/expensive	.81	.67	-17.3	1.06	.73	31.1
reasonably priced/unreas. priced	.89	.93	4.5	.76	.77	1.3
reliable/unreliable	.86	1.10	27.9	.63	.63	-
luxury/necessary	1.28	1.24	-3.3	1.04	1.11	6.7
exclusive/common	1.61	1.39	-13.7	.87	.93	6.9
heavy ind. products/light man.	1.25	1.38	10.4	.80	.98	22.5
<b>Service and Engineering</b>						
good workmanship/poor workmanship	.88	1.04	18.2	.61	.55	-9.8
technically advanced/tech. backward	1.13	1.24	9.7	.77	1.00	29.9
mass produced/hand made	1.54	2.00	29.9	1.69	1.86	10.1
world-wide distribution/domestic	.86	1.67	94.2	1.00	1.40	40.0
inventive/imitative	1.43	1.76	23.1	.49	.79	61.2
<b>Advertising and Reputation</b>						
pride of ownership/not much pride	1.35	1.30	-3.7	.58	.91	56.9
much advertising/little advertising	.48	.86	79.2	1.40	1.66	18.6
recognizable brand names/unrec. names	1.33	1.42	6.9	.76	1.06	39.5
<b>Design and Style</b>						
variety/no variety	.65	1.26	93.8	1.30	1.63	25.4
outward appearance/performance	.67	.75	11.9	1.40	1.48	5.7
clever use of color/not clever use	1.29	1.30	.8	1.20	1.21	.8
<b>Consumers' Profile</b>						
more for young people/more for old	1.30	1.28	-1.5	1.75	1.74	-.6
more for men/more for women	1.00	.97	-3.9	.52	.60	15.4
upper class/lower class	1.11	1.31	18.0	.81	1.00	25.3

SOURCE: Computed from Nagashima (1977) data.

being more reliable, as having more world-wide distribution, and as having more variety than U.S. products, had disappeared by 1975. U.S. products in 1975 were viewed as more reliable, as having more world-wide distribution, and as having more variety than Japanese products.

The gains that U.S. products made in the opinions of Japanese businessmen over Japanese products were lost in the Japanese comparison of U.S. with German products. In 1967 and 1975, the Japanese viewed German products as more reliable, of better quality workmanship, more inventive, with more pride of ownership, and as more reasonably priced than U.S. products. The only gain that U.S. products enjoyed over German products in the eyes of the Japanese businessmen was in the opinion that U.S. goods were cheaper to own.

The response of Japanese businessmen in the supplemental questionnaires between 1967 and 1975 gives additional information on the relative decline of American products (especially autos) in Japan over time. Table 8 lists the products that come to Japanese businessmen's minds first when they think of the products of particular countries. Automobiles were listed first for Germany and the U.S. during both periods. For Japan, autos were unlisted in 1967 but were listed second to cameras in 1975. Thus, the greatest impression toward automobiles was the meteoric rise of those by the Japanese.

The response of Japanese businessmen to the question of which country produces the automobiles of greatest value during the two periods is listed in Table 9. Between 1967 and 1975, the percentage of Japanese businessmen who thought that U.S. autos were of the greatest value fell sharply from 54% to 19%. The most dramatic increase was in the percentage who believed that Germany

TABLE 8

PRODUCTS LISTED IN DESCENDING ORDER OF RECOGNITION FOR EACH COUNTRY SPECIFIED BY JAPANESE BUSINESSMEN

	1967	1975
USA	1. automobiles 2. foods 3. electronic products 4. computers 5. Coca Cola 6. machinery 7. airplanes	1. automobiles 2. computers 3. airplanes 4. electronic products 5. foods 6. textiles 7. agricultural products
Japan	1. cameras 2. electronic products 3. transistor radios 4. watches 5. shipbuilding 6. toys 7. precision machines	1. cameras 2. automobiles 3. shipbuilding 4. electronic products 5. precision machinery (watches) 6. radios 7. textiles
Germany	1. automobiles 2. precision machinery 3. razors 4. medical & pharmaceutical prod. 5. machinery & tools 6. cameras & optical goods	1. automobiles 2. razors 3. precision machinery (watches) 4. medical & pharmaceutical prod. 5. machinery & tools 6. cameras & optical goods

SOURCE: Nagashima (1977).

produced the autos of greatest value -- from 25% in 1967 to 55% in 1975. The percentage for Japanese autos was up from 5% to 12%. Thus, the increase in the impression of German autos resulted primarily in the decreased impression of U.S. autos.

TABLE 9

RESPONSE TO THE FOLLOWING: "WHICH COUNTRY DO YOU THINK PRODUCES THE AUTOMOBILES OF GREATEST VALUE WHEN ONE CONSIDERS PRICE, QUALITY, DESIGN, SERVICE, ETC.?"

Country	1967	1975
U.S.A.	54%	19%
Germany	25%	55%
Japan	5%	12%
Others	16%	14%
TOTAL	100%	100%

SOURCE: Nagashima (1977).

The Nagashima (1977) studies indicate that the prestige of U.S. made cars has fallen over time in Japan. This loss of prestige apparently occurred as the relative quality-reliability of U.S. cars declined and the relative variety of U.S. products increased. The reliability factor, therefore, appears to be more important than variety in the world market. If the U.S. is to remain competitive with Japanese and German made cars, U.S. manufacturers must produce cars that are perceived as more reliable.

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OBESITY AND SOCIAL MARKETING  
AN AID APPROACH TO SEGMENTATION

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Abstract

This paper deals with the use of the accepted market segmentation technique of measuring life style in terms of activities, interests, and opinions in order to detect differences in the life styles of obese and non-obese subjects. These differences were found to exist and could be used to identify and isolate market segments for the effective development of social marketing programs concerned with treatment and/or prevention of obesity.

Introduction

Obesity is a national health problem. This condition may not only cause increased sickness and early death, but leads to a widespread acceptance of ineffective fad diets with resulting adverse effects on health. In reviewing the literature on the subject of obesity, the authors of a report for the Canadian government conclude that treatment techniques based on imperfect knowledge of causal effects can not be significantly effective (Liefeld and Sabry, 1973). These authors conclude that a prevention approach may be the most desirable long-term alternative and the one most applicable to social marketing programs.

Methodology

The responses to AIO rating statements, demographic questions, and self-assessed height and body weight measurements were collected from a group of fourteen-hundred and seventy-one male respondents. Utilizing the height and weight measurements, the nominal dependent variable of body fat was determined. This resulted in isolating an analysis group of non-obese and obese subjects. The existence of a relationship between each of the independent variable--AIO rating statements and demographic variables--and the dependent variable of body fat (obese or non-obese) was tested via chi-square analysis. The independent variables represent, individually and in combination, certain domains of life style. Those independent variables that were found to be associated with body fat content, at a .05 level of significance or better, were interpreted as to the life style domains they represent.

Findings

In a total of 49 cases the null hypothesis, that there is no association between body fat and the given variable, was rejected. In terms of demographics the obese tend to be older than the non-obese and are more likely to be married members of two or three person households. Consistent with these observations, they are more likely to be employed full-time rather than be an unemployed student or part-time employee and they have a lower level of educational attainment than the non-obese.

In terms of life style, the obese appear to be more traditional or conservative than the non-obese and less of a risk-taker. The obese tend to be less socially active than the obese and less physically active and physically fit than the non-obese. The obese are more favorably inclined toward cooking and basic foods, more family and child oriented, have a more favorable attitude toward credit, and are more price conscious

than the non-obese males. The life style difference profile generated in this project contains domains other than the obvious physical activity and nutrition areas. These domains can be important in developing marketing strategies to reach various market segments with social marketing programs to prevent and contract obesity.

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# LOCATION AS A FACTOR IN THE MARKETING OF PHYSICIANS' SERVICES

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## Abstract

Given the importance of a locational strategy for physicians, this article provides findings on the demographic and economic determinants of physician office location within the Chicago Metropolitan area from 1950 to 1975. An important finding is that measures of market potential and competition have lost importance over time to the growing influence of medical facilities in determining physician office location.

## Introduction

Recently there has been considerable interest in the marketing of health care services. Most of these studies have focused on the delivery of health care services by hospitals and have involved extensively the preventive care educational concept. This interest in the marketing of health care has primarily been by hospital administrators, but it is also important that marketers contribute their expertise to the 163 billion-dollar health service market. In this light, it is important to note that physicians and not hospitals are the key factor in delivering health care services. Indeed the non-physician health care market is estimated to be only 22 percent. Furthermore, it is the physician who directs most of the major decisions within hospitals. For example, he/she recommends admission, orders diagnostic and therapeutic measures, and determines when the patient is fit to leave the hospital.

Given the importance of the physician in providing health care services, the strategy of place or location appears as one of the important marketing mixes for these services. Specifically, this paper investigates the significance and importance of the factors determining physician office location over time.

## Marketing Strategies for Physicians' Services

In addition to providing a key role in the delivery of health care services, physicians have considerable market power over these services. For example, inadequate consumer information gives physicians the ability to induce demand for their services. This situation could lead to too much health care or unnecessary surgery in some locations and inadequate health care at other locations.\*

Providing the appropriate place or location for health care services is perhaps the most important marketing strategy used by physicians. By selecting locations aimed at target populations, physicians can maximize

their profits or market share. This strategy appears to be more important than a pricing and promotional strategy since the American Medical Association's code of ethics does not favor published price lists or advertising. However, there is some evidence that physicians select office locations that permit them to charge higher unpublished prices, and schedule more visits (Kehrer, 1979). Also, in locations having excess demand, physicians have been known to schedule shorter and more frequent visits to curtail the waiting time for appointments and in offices (Kehrer, 1979).

These findings suggest that physicians have a price and service strategy but we view it as secondary to a locational strategy. The latter strategy appears to be aimed at maximizing profits or some combination of profits and leisure. Given the importance of location, this article provides marketers with a macro-view of the locational determinants of physician location within a large metropolitan area. The six-county Chicago Metropolitan region is the area for investigation. Using multiple regression analysis, the aim is to find the determinants of physician office location for various time periods since 1950. Within the Chicago area, the specific unit of observation are 192 health care areas. These health care areas include 75 homogeneous socioeconomic areas within the city (group of census tracts) and similar grouping of cities and urban places in the suburbs. Health care areas were constructed to approximate local trading or service areas for physicians.\*\* Data for this study pertain to physician office locations and come from the American Medical Directory for 1950, 1960, 1970, and 1975.\*\*\* From these data, it was possible to trace a physician's office location over time and space.

Before presenting the empirical tests, we will briefly describe the variables used in this analysis.

## Factors Determining Physician Office Location

Many of the factors determining physician location are likely to be similar to those for retail store location. For example, population size and growth, buying power, type of customers, competitive structure, as well as locational preference are general factors that would apply to any retail firm but also appear to influence the location of physician services. The following independent variables will be used in this study:

1. Median family income of residents in health care areas.
2. Population size of health care areas.
3. Number of hospital beds in health care areas.

\* Quality of health care is a major public concern. The infamous 'Medicaid Mills' have received national media coverage in 1977. Also, the rate of surgery increased 33 percent or 3.5 times faster than population growth according to unpublished data from the National Center for Health Statistics, Department of Health Education and Welfare.

\*\* Health care areas are estimates of a physician's service or trading area and therefore should contain nearly all of a physician's patients.

\*\*\* Data for this paper were compiled and given permission for use in this paper by Donald R. Dewey, Department of Geography, DePaul University.



4. Absolute change in percent of black population in health care areas.
5. Locational preference of physicians (0 = city areas and 1 = suburbs).
6. Number of office-based physicians in health care areas.

Income is used to measure the buying power for physician services. Physicians may also seek higher income locations in order to charge higher fees, seek greater leisure or obtain some combination of these objectives. Also, as the trends toward specialization continues, physicians should be even more attracted toward higher income areas since the population there generally has more physician visits than lower income areas.

Population size is a measure of market potential and possibly minimum threshold sizes for certain physician specializations. Population size is also used in our analysis as a control variable for the size of a health care area. This control function allows for an accurate influence by the other independent variables.

The hospital beds variable measures the role of medical facilities and the referral function of hospitals as a determinant of physician locations. As technology and time become more important to physicians, hospital beds are expected to increase in importance as a determinant of physician location.

Locational preferences for physicians are measured by a dummy variable which records a physician's preference for the city or for the suburbs. That is, it is expected that physicians will prefer the suburbs compared with the city because of the status of servicing and living with higher-income suburbanites.

The number of physicians in an area is used as a measure of competitive supply. It is hypothesized that physicians will avoid locations with a relatively large supply of doctors given the above measures of market potential.

The racial change variable measures the problems associated with running a business in a racially changing community. This variable is also expected to repel physicians from locations where racial change adversely affects property values.

The dependent variable in this analysis is the absolute change in the number of office-based physicians by health care areas. Although this is a cross-sectional study, the focus here is on a dynamic response of physicians to the independent variables, therefore the change in physician offices is used. Since response by age groups is also of interest, the following additional dependent variables will be used:

1. Absolute change in office locations, younger physicians, age less than 45.
2. Absolute change in office location, prime age physicians, age 45 to 64.
3. Absolute change in office location, older physicians, age over 65.

Empirical results for the above variables by age groups for the 1950-60, 1960-70, and 1970-75 time periods will be analyzed. The purpose of this investigation is to determine the stability of the determinants of physician location from a macro-view.

#### Regression Analysis for Physician Office Locations, 1950-60

As shown in [Table 1](#) (Appendix), the above independent variables provide a reasonably good explanation of factors determining the location of physician offices during the 1950-1960 period. All the regression coefficients have the expected sign and are significant according to the t-ratios except for the dummy variable measuring locational preferences. The coefficient of determination,  $R^2 = .74$ , for the regression of all doctors age groups, shows the importance of the independent variables in explaining the changing pattern of physician office locations. The results reported here pertain to those variables which best fit the data and were found after several stepwise regression runs. It is important to note that multicollinearity of the independent variables was not a problem in this study. None of the zero-order correlation coefficients were above .5.\* Specifically, the results in [Table 1](#) (Appendix), show that physicians during the 1950's were attracted to locations with higher incomes, growing populations, and larger population size. They tended to avoid or relocate from 1) locations experiencing racial change, 2) lower-income trading areas, and 3) areas having a larger number of physicians. Locational preferences for the suburbs versus the city was not significant during this period.

These results show that physicians appear to be good marketers because they were sensitive in their locational decisions to variables measuring market potential. In particular, they selected locations that exhibited greater population growth and larger population size. In addition, physicians were targeting their services to higher income groups. The locational decisions by young and prime-age physicians were similar as shown by the  $R^2$ 's in [Table 1](#) (Appendix). Older physicians, as expected, were not profit motivated as evidenced by the low  $R^2$  for this group.

In addition to variables measuring market potential, physicians were particularly sensitive to trading areas having a larger number of physicians already practicing there. For example, the regression coefficient (for all ages in [Table 1](#), Appendix) show that for every 10 additional physicians in a trading area, a decline of 2.8 occurred in the change of office-based physicians in that location. In addition to this locational barrier, racial change in a trading area was also found to be significant.

#### Regression Analysis for Changes in Physician Location, 1960-1970

In contrast to the 1950's, physicians increased their locational preferences in the 1960's for the suburbs of Chicago. Evidently, physicians followed their customers to suburbia during this period. This trend is reflected in the significant t-ratio for the locational preferences dummy coefficient (3.67) from [Table 2](#) (Appendix). This significant coefficient for the 1960-70 period contrasts with the insignificance of locational preferences (as shown in [Table 1](#), Appendix) in the 1950-60 period. During the latter period, the

\*In previous regression runs, multicollinearity was a problem. However, we successfully avoided it in the reported results by specifying both level and change variables.



growth of population was a significant factor. But in the 1960's, population growth was no longer significant and was dropped from the variables appearing in [Table 2](#) (Appendix). Instead, the growth of hospital facilities in the 1960's became an important influence upon physician location. As seen in [Table 2](#) (Appendix), the t-ratios were highly significant for the hospital beds variable.

Except for hospital beds, all of the variables appearing in [Table 2](#) are similar to the independent variables used for the 1950's. Furthermore, nearly all of them have the expected signs and are significant. The independent variables in [Table 2](#) (Appendix), also explain approximately 64 percent of the variation in the change of physician office location. For younger physicians, the regression equation improves to an explanation of 80 percent. This finding refutes the view that younger physicians are not profit motivated, but are more socially concerned than prime-age doctors. In fact, the  $R^2$  is only .46 for prime-age physicians (age 45 to 64). Apparently, younger physicians are more mobile and thereby can better position themselves within a dynamic market than other physicians. This finding also dovetails with the result that younger physicians were not as sensitive to racial change as were their counterparts in the 1950's ([Tables 1 and 2](#), Appendix). Prime-age physicians, however, were repelled by the racial change of blacks in health care areas for both the 1950's and 60's.

#### Regression Analysis for Changes in Physician Location, 1970-75

During the early 1970's, physicians were influenced primarily by the number of hospital beds and population growth in a trading area. Those findings show a continuation of the patterns found for the 1960's. Other variables, such as income or buying power, in [Table 3](#) (Appendix), were not significant locational factors in this period. In addition, other insignificant variables such as racial change were dropped from the results reported in [Table 3](#) (Appendix).

However, the regression results for the only two significant variables in [Table 3](#) -- hospital beds and population growth -- accounted for 72 percent of the variation in the change of physician offices.\*

During the early 1970's, physicians were not as concerned with a suburban preference as were physicians during the 1960's. The t-ratio for the dummy variable was not significant in [Table 3](#), but was in [Table 2](#) (Appendix). Also, in contrast to previous periods, physicians in the early 1970's were not influenced by the existing competitive structure in a trading area. Physicians were, however, significantly attracted to locations having medical facilities as measured by hospital beds ([Table 3](#), Appendix).

The strong emergence in the influence of medical facilities upon physician office locations and the corresponding insignificance of market potential and competitive supply in the 1970's can perhaps best be explained by the statement of Wright Mills in [White Collar](#) where he noted that "the self-sufficiency of the entrepreneurial physician has been undermined in all but its economic and ideological aspects by his dependence, on one hand, upon technological equipment

that is formally centralized and, on the other hand, upon informal organizations that secure and maintain his patients" (Mills, 1951). For Mills, and our findings, the bureaucratization of health care means a restriction of physicians to locations where there is sufficient medical hardware, an established informal referral system, and supportive personnel.

#### Discussion and Summary

The aim of this paper has been to provide marketers with a macro-view of the determinants of physician location. Given the constraint on published pricing and advertising within the medical profession, findings here indicate that physicians have primarily relied upon a locational marketing strategy to meet their objectives. In selecting sites for their offices, they have been influenced by measures of market potential such as population size and growth, and income or buying power. In addition, results show that physicians within the Chicago metropolitan area tended to avoid locations having a relatively larger number of possible competitors. More recently, regression findings show that market potential and competitive structure have lost significance to the growing importance of medical facilities in determining a physician's location.

As part of a locational strategy, physicians were also likely to have used price as a basis for segmenting their markets (Masson, 1974). In the future, price is expected to be used more often as a marketing strategy considering the growing supply of surgeons in some locations.

Although findings show that physicians have met their objectives in selecting office locations, consumers have been concerned about the quantity and quality of physicians' services in low-income locations. Results here show that physicians tended to avoid low-income areas and locations with racial change. This behavior has resulted in problems of accessibility of some consumers to physicians' services, and longer waiting times for appointments and in offices. In Chicago, for example, accessibility to physicians has declined from .99 physicians per 1,000 persons in 1950 to .23 in 1975 for the ten lowest income health care areas.\*\* In contrast, the ten highest income areas increased their share of physicians from 1.78 to 2.70 over the same time period. In addition, Clarke has found a reluctance of physicians to accept Medicaid patients given the low reimbursement rates to physicians under this program (Clarke, 1979). These concerns have led some health care planners to favor a policy of providing incentives to physicians for locating in low-income markets.

\* At this stage of the study, data have not been compiled by age group for 1975. Recent results also await the reporting of socioeconomic data from the 1980's census.

\*\* Computed from data compiled from [American Medical Directory](#), Selected Years.

APPENDIX

TABLE 1

LOCATIONAL CHANGE OF OFFICE-BASED DOCTORS, 1950-1960  
BY AGE, CHICAGO METROPOLITAN HEALTH CARE COMMUNITIES

Dependent Variables	Independent Variables							Adjusted R <sup>2</sup>
	Constant	Number of Doctors 1950	Population 1950	Income 1950	Absolute Change, Population 1950-60	Absolute Change, Percent Black	Location Preference	
Absolute change in number of physicians 1950-60, all ages	-14.47	-0.2884 <sup>a</sup> (-19.61) <sup>b</sup>	0.0003 (2.96)	0.0028 (6.55)	-0.0013 (6.55)	-0.6278 (4.88)	1.291 (0.301)	R <sup>2</sup> = .743 F = (93.17)
Change in number of physicians, less than age 45, 1950-60	-8.62	-0.3657 (-18.48)	0.0001 (3.31)	0.0013 (3.00)	0.0007 (7.95)	-0.1816 (-3.01)	2.913 (1.45)	R <sup>2</sup> = .745 F = (94.17)
Change in number of physicians, age 45-64, 1950-60	-5.42	-0.2900 (-19.59)	0.0002 (5.05)	0.1103 (2.68)	0.0005 (5.20)	-0.3976 (-6.05)	-1.156 (-0.52)	R <sup>2</sup> = .728 F = (86.43)
Change in number of physicians, age over 64, 1950-60	-0.45	-0.134 (-7.22)	0.0001 (1.64)	0.0003 (1.74)	0.0001 (1.53)	-0.0731 (-2.96)	-0.752 (0.919)	R <sup>2</sup> = .273 F = (12.97)

a = regression coefficients  
b = t-ratios

TABLE 2

LOCATIONAL CHANGE OF OFFICE-BASED DOCTORS, 1960-1970  
BY AGE, CHICAGO METROPOLITAN AREA

Dependent Variables	Independent Variables							Adjusted R <sup>2</sup>
	Constant	Number of Doctors 1960	Population 1960	Median Family Income 1960	Absolute Change, Hospital Beds 1960-70	Absolute Change, Percent Black 1960-70	City/Suburb Dummy Variable	
Absolute change in number of physicians, 1960-70	-20.028	-0.2196 <sup>a</sup> (-13.90) <sup>b</sup>	0.0001 (1.73)	0.0026 (5.811)	0.0143 (4.78)	-0.3310 (-3.86)	10.993 (3.67)	R <sup>2</sup> = .635 F = (56.49)
Absolute change in number of physicians, less than age 45 1960-70	-43.06	-0.134 (-25.28)	0.0001 (.660)	0.0005 (3.27)	0.0057 (5.71)	-0.0312 (-1.08)	2.991 (2.96)	R <sup>2</sup> = .802 F = (130.03)
Absolute change in number of physicians, age 45-64, 1960-70	-11.754	-0.096 (-8.80)	0.0001 (2.22)	0.0015 (4.87)	0.0067 (3.22)	-0.2291 (-3.84)	6.681 (3.20)	R <sup>2</sup> = .466 F = (28.79)
Absolute change in number of physicians, over age 64, 1960-70	-3.388	2.0123 (2.46)	0.0001 (0.379)	0.0005 (3.77)	0.0019 (2.05)	-0.0819 (-3.03)	0.2199 (.233)	R <sup>2</sup> = .144 F = (6.35)

a = regression coefficients  
b = t-ratios

TABLE 3  
 LOCATIONAL CHANGE OF OFFICE-BASED DOCTORS, 1970-1975  
 CHICAGO METROPOLITAN AREA

Dependent Variables	Independent Variables							Adjusted R <sup>2</sup>
	Constant	Number of Doctors 1970	Population 1970	Hospital Beds 1970	Median Family Income 1970	Absolute Change Population 1970-75	City/Suburbs Dummy	
Absolute change in number of physicians' offices, 1970-75	2.279	-0.0165 <sup>a</sup> (0.723) <sup>b</sup>	-0.0003 (-1.24)	0.235 (20.47)	0.0007 (0.689)	0.0022 (2.92)	-8.864 (-0.789)	R <sup>2</sup> = .731 F = 105.1
Absolute change in number of physicians' offices, 1970-75				0.228 (22.41)	0.0006 (0.588)	0.0019 (2.69)	-7.489 (-7.06)	R <sup>2</sup> = .728 F = 128.9

a = regression coefficients

b = t-ratios

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HOW THE HEALTH CARE INDUSTRY CAN LEARN  
FROM MARKETING MISTAKES THAT BUSINESSES MAKE

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Abstract

As the health-care industry moves towards a fuller implementation of marketing techniques, it is likely to repeat many of the marketing mistakes that businesses have made over the years. The purpose of this paper is to review and explain some of the more common marketing mistakes so as to stimulate a greater understanding of the marketing discipline on the part of health-care professionals and lead to better marketing practices.

Marketing Process Versus Marketing Concept

In marketing practice, business firms often fail to understand the difference between the process of marketing and the marketing concept. The process of marketing includes all those activities associated with the development and implementation of marketing techniques. The concept of marketing can best be described as the underlying philosophy by which the organization operates. This philosophy holds that the basic reason for the organization's existence is to satisfy customer needs and wants in the marketplace in ways consistent with the firm's profit objectives. While it is relatively easy to implement the marketing process, it is much more difficult to achieve an understanding of the marketing concept. Unfortunately, how the "process" of marketing is carried out is vitally affected by the philosophy of the organization. Effective marketing practice includes using the "tools" involved in the marketing process but also, and more importantly, it involves a way of "thinking" about the market.

Short Run Marketing Versus Long Run Marketing

Closely related to the problem of getting an organization to "think" in a responsive way towards the market is the problem of short-run marketing versus long-run marketing. Most profit institutions as well as non-profit institutions desire to exist in the long run but obviously must deal with the more current short-run situations. The unfortunate problem that often occurs, however, is that so much of the institutions energies are devoted to solving short-run problems that the long-run is overlooked. But one thing is certain, and that is the fact that the long-run eventually comes. Reasons for this situation include the nature of incentive systems within the firm and increasing turbulence in short-run environments.

Reliance on Demand Creating Techniques

Another error quite common in the profit sector is the "so-called" demand creating techniques of marketing to sell goods and services. Although most often associated with advertising, these demand creating techniques can take a variety of forms such as sales promotion, couponing, special offers, rebates, and so on. The problems with the reliance on these techniques are threefold. First of all, they are often misunderstood for marketing. Secondly, they often create inappropriate expectations on the part of consumer. And finally, they often lead to an underestimation of the behavioral change problem on the part of consumers. Advertising and promotional variables are indeed essential to any well-conceived marketing strategy. However, health-care professionals must view these

variables within the proper perspective of the overall marketing mix.

Failure to Utilize Marketing Research  
as an Effective Tool

Of all the marketing mistakes that businesses make, the failure to utilize marketing research as an effective tool is probably the most common. Most profit sector firms actively engaged in the process of marketing use marketing research information to some extent. The degree of usage and the sophistication of marketing research varies widely, however. The two most often cited reasons for the failure to utilize marketing research effectively are the perceptions that it is time-consuming and costly. Good marketing research does take time, no doubt, but it takes no more time to do than the other tasks in the marketing function. Marketing research should also return benefits that more than pay for itself in the long run.

Conclusions and Recommendations

Several marketing mistakes common to the business world have been discussed in the previous section. The following are some specific recommendations for the health-care industry.

1. Move slowly in implementing marketing in your institution. Creating an institutional environment conducive to good marketing practices will not be done overnight. On the other hand, nothing will doom marketing faster than an early record of failures.
2. Learn as much about marketing as possible. A two-day seminar in marketing principles is a beginning, but not nearly enough to thoroughly understand this complex discipline.
3. Pay as much attention to long-run marketing as to short-run marketing. Encourage long-range thinking through incentive and evaluation systems.
4. Avoid exaggerated or excessive claims for new or existing services. Unfulfilled consumer expectations can lead to unfavorable word-of-mouth communications, possibly spelling disaster even for a well-conceived new service.
5. When planning new health-care services, anticipate any behavioral changes required on the part of consumers. Many types of health-care consumer behavior are strongly ingrained habits.
6. View the marketing communications function as broader in nature than merely advertising. Do not expect advertising to compensate for deficiencies in other areas.
7. Plan, budget for, and use marketing research. Any well-developed marketing strategy has as its foundation solid marketing research.

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## PREVENTIVE HEALTH CARE: A MARKETING APPROACH

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### Abstract

This article addressed the applicability of marketing concepts to the delivery of community health programs, with specific emphasis on health promotion. The realization that marketing has much to offer community health is not new. However, the article "highlights" health promotion and develops a framework that integrates the goals, action criteria and feasible actions that can lead to behavioral and environmental changes conducive to health.

### Introduction and Overview

Community health-care planning is a recognized complex task that is desperately needed. An integral part of health-care planning is the determination of health needs and status of people living within specified geographical areas. The accomplishment of this task allows health officials to more efficiently allocate health resources.

During its development as a profession, community health has placed too much emphasis on evaluating the morbidity status of the general population. As Kotler (1975) points out, "too many health officials see their job as curative--this is, to treat outbreaks of illness--rather than preventive--to create a climate that produces good health." The validity of Kotler's statement is seen in the World Health Organization's conception of health. According to it, "health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." What affects the social well-being of an individual, family, or community groups affects them physically and mentally as well. The best way to attain and maintain well-being is to prevent illness and promote health. This orientation of prevention requires substantial creativity and innovation.

The application of marketing tools and techniques to the health care area is essential if goals and objectives are to be reached within the constraints of available resources. Health care efforts must become more actively involved in consumer analysis, market segmentation, promotion (advertising, personal selling, publicity), pricing, product/service presentation, and distribution (delivery) considerations.

### The Conceptual Framework

In developing a conceptual framework, consideration was given to analyzing the phases of a community health agency's outreach program. These phases include: (1) goals; (2) awareness level; (3) client action; and (4) evaluation through feedback. Additionally, the contributions of other scholars who have addressed the role of marketing concepts in health services were incorporated in devising the framework.

### Summary and Implications

Marketing theorists and practitioners have a great deal to offer community health officials. This realization is not new, as is evidenced by the direct involvement of marketing specialists in various non-profit organizations (i.e., hospitals, schools, government agencies). This

article presents an effort at "highlighting" one particular area of health (health promotion) and develops a framework that integrates the goals, action criteria and feasible actions that can lead to behavioral and environmental changes conducive to health. Such a framework provides an opportunity for decision-makers to determine more efficient means of allocating scarce resources. The conceptual model gives an overview of the system from a marketing perspective, thereby giving the health practitioners a broader view of present actions that should aid in the planning process. A marketing planning process does not guarantee that public community health goals will be realized but it serves as a bridging gap mechanism between marketers and health professionals toward more useful implementation actions.

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## CORRECTIVE ADVERTISING: THE CANADIAN SITUATION

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### Abstract

The status of corrective advertising in Canada is at least five years behind the U.S. At the present time, corrective advertising as a legal remedy to deceptive advertising in Canada is about at the stage of the 1969 Campbell Soup Co. case in the U.S. However, recent occurrences in the corrective advertising area in Canada should alert Canadian marketers and politicians to review the implications of what has happened in the U.S. over the past ten years, as this may serve as a guide to what will be happening in Canada over the next five years.

### Recent Developments

A recent ruling by the British Columbia Supreme Court in Stubbe et al. and Director of Trade Practices v. P. F. Collier & Sons Ltd. (1977) 3 W.W.R. is of great concern to advertisers, other marketers, and lawyers. In this case, Collier's method of selling encyclopedias was found to be deceptive. In addition to other remedies, the plaintiff asked the court to order the defendant to run corrective advertisements informing consumers that Collier's had been found guilty of deceptive advertising. This request was denied as the judge felt that the deception was to a small group of consumers, and a province-wide corrective advertising campaign was not warranted. However, the judge provided a ruling as to when a corrective advertising campaign should be used.

An order to a supplier to advertise its delinquencies and the restraints imposed is clearly useful where a supplier has run a deceptive advertising campaign by newspaper, television, or radio. In such a case the public at large will have received the supplier's deceptive message and the supplier can only be effectively denied the benefit of its deception by bringing the deception to the attention of the public by corrective advertising, having the same coverage as that given the deception ([1977] 3 W.W.R., p. 543)

To date, corrective advertising as a legal remedy to deceptive advertising claims has not been used under Federal legislation in Canada. However, corrective advertising has been used as a legal remedy under the British Columbia Trade Practices Act which empowers the court to order an advertiser to "advertise to the public in the media in such a manner as will assure prompt and reasonable communication to consumers and on such terms and conditions as the court considers are reasonable and just" (British Columbia Trade Practices Act, S.16).

At this point in time, three firms in the Province of British Columbia have been ordered to comply with some form of corrective advertising: (1) Central Safety, a seller of smoke alarms, was ordered to run corrective advertisements in two newspapers each week for one month for grossly misrepresenting their products;

(2) APT Distributors Ltd., a furniture retailer, was required to publish an apology in all Vancouver newspapers and offer a 10 percent refund to customers affected by deceptive advertising in a "close-out sale"; and (3) The Shell Oil Co. agreed to send a letter to all of its credit card holders which corrected misleading price and credit terms contained in a sales catalog.

### Corrective Advertising - U.S.

Although the Federal Trade Commission was established in 1914 to control unfair methods of competition, which includes false and misleading advertising, it was not until 1969 that corrective advertising was suggested as a remedy for deceptive advertising.

The concept of corrective advertising as an F.T.C. remedy was first proposed in a Commission proceeding in 1969, by Students Opposing Unfair Practices, Incorporated ("SOUP"), composed of George Washington University law students. In Campbell Soup Co., the respondent was alleged to have misrepresented the proportion of solid ingredients in its soups by placing marbles in the bottom of the soup bowls used in filming television commercials. This technique forced most of the soup's solid ingredients to the surface, where they were easily detected by the camera, thereby giving the soups a deceptively rich appearance. Shortly after the Commission had accepted a provisional consent agreement ordering Campbell to cease and desist from the practice, and had placed the order on its public record for comment, SOUP filed a petition to intervene on the ground that the order as announced was inadequate to protect the public interest. (Thain, 1973-4, p. 2)

SOUP wanted an order which would have required Campbell's to disclose in all future advertising, for a specified time, that they had used advertising which the FTC had found misleading. The order was denied but the Commission established standards to determine when corrective advertising would be an appropriate remedy.

In August 1971, the FTC issued its first order requiring corrective advertising. The order was issued against the Continental Baking Company, which markets Profile Bread. The order stated that Continental must cease all Profile advertising unless 25 percent of future expenditures state that Profile Bread is not effective for weight reduction, a position contrary to the interpretation of earlier advertising.

Since the Continental order, the FTC has been involved with seventeen major corrective advertising cases. Two recent and important cases involved Warner-Lambert and American Home Products. Warner-Lambert had represented Listerine mouthwash as a preventative and a cure for both colds and sore throats since 1879.

A complaint charged Warner-Lambert with making statements in advertising that Listerine would ameliorate, prevent and cure colds and sore



throats. It also alleged that through the use of the statement, "Kills Germs by Millions on Contact," Warner-Lambert falsely represented that Listerine's ability to kill germs is of medical significance in the treatment of colds and sore throats. (Journal of Marketing, July 1976, p. 118)

The FTC issued a cease and desist order that required Warner-Lambert to spend a sum of money equal to the average advertising budget for Listerine, for the period April 1962 to March 1972, on corrective advertising. Estimates of the expenditure have ranged from \$10 to \$20 million. The FTC also required the company to disclose in all future advertising for the defined period the statement, "Contrary to prior advertising, Listerine will not help prevent colds or sore throats or lessen their severity" (562 Federal Reporter, p. 763).

Warner-Lambert appealed to both the U.S. Court of Appeals and the Supreme Court. The courts ruled that the FTC's standards for the imposition of the corrective advertising, and the duration of the disclosure requirement, were entirely reasonable.

If a deceptive advertisement has played a substantial role in creating or reinforcing in the public's mind a false and material belief which lives on after the false advertising ceases, there is clear and continuing injury to competition and to the consuming public as consumers continue to make purchasing decisions based on the false belief. Since this injury cannot be averted by merely requiring respondent to cease disseminating the advertisement, we may appropriately order respondent to take affirmative action designed to terminate the otherwise continuing ill effects of the advertisement. (562 Federal Reporter, p. 762)

In the case of American Home Products, the FTC administrative law judge

ripped into past advertising for American Homes Products' Anacin and ordered \$24,000,000 of future Anacin ads to disclose that "Anacin is not a tension reliever" . . . The \$24,000,000 figure is FTC's estimate of the average annual Anacin ad budget from 1968 to 1973. The one-year run for the correction is the same rule of thumb upheld by the courts in the Listerine case. (Advertising Age, September 18, 1978, p. 1)

As can be seen from these examples, corrective advertising is used as a remedy for deceptive advertising in the U.S.

However, corrective advertising is not an automatic penalty for deceptive advertising. In fact,

The Federal Trade Commission has declined to issue a proposed trade rule that would have required automatic corrective advertising whenever an ad campaign of a year's duration on health, safety or nutritional products was found to be misleading . . . In rejecting the proposal, the FTC noted that it "possesses sufficient authority to deal with corrective advertising on a case-by-case basis." (Jennings, 1980, p. 16)

## Corrective Advertising - Canada

The need for consumer protection against false and misleading advertising in Canada is described in a statement by Andre Ouellet, Minister of Consumer and Corporate Affairs.

False and misleading advertising and unethical promotional practices distort our free economic system which is built on honesty and fair play. They deny the consumer the information required to make wise and effective buying decisions, and they deprive ethical promoters and honest advertisers of the deserved rewards for offering better quality, more competitive prices, or simply the un-doctored facts. (Amirault and Archer, 1977, p. 9.1)

Statutory control of advertising in Canada is exercised under various federal and provincial statutes. The federal legislation includes the Food and Drug Act, the Broadcasting Act, the Consumer Packaging and Labelling Act, the Textile Labelling Act, the Criminal Code of Canada, and the Combines Investigation Act. The provincial statutes include the Trade Practices Act in British Columbia, the Unfair Trade Practices Act in Alberta and the Business Practices Act in Ontario. It should be further noted that many other provincial statutes not dealing directly with trade or business practices often contain a section covering misleading advertising. For example, Section 28 of the Ontario Mortgage Brokers Act provides injunctive power to the provincial registrar in the case of false and misleading or deceptive statements in any advertising brochure circulated by a mortgage broker (Amirault and Archer, 1977).

At the federal level, the majority of prosecutions for false and misleading or deceptive advertising result from charges filed under the Combines Investigation Act (Thompson, 1977). The relevant sections of the Act are 36 and 37.

Section 36 (1) (a) refers to advertisers making a representation to the public which is false or misleading in a material respect--for example, the price to be charged. Section 36 (1) (b) refers to a false or misleading representation to the public as to the performance, efficacy or length of life of a product. Section 36 (1) (c) refers to a false or misleading representation as to the price at which a product is ordinarily sold.

The remaining paragraphs of Sections 36 and 37 of the Combines Investigation Act deal with specific technical abuses. They include the misuse of test and survey results, comparative advertising, dangling comparisons, meaningless superlatives, visual representations, testimonials where only the laudatory portions of the testimonials are isolated, promotional contests, warranties or guarantees that are worded in such a way that no significant benefit is conferred on at least some people to whom they are given, and specials where the word implies a reduction below the regular price that is not in fact offered (Thompson, 1977).

There is a provision in the CIA for the defence of "due diligence." The accused must prove three things for the defence to apply: honest error, due diligence, and immediate corrective action. Honest error means that the accused must show that the mistake arose from ignorance or an erroneous notion about the product at hand. Due diligence means that the accused made every effort to provide accurate information. Corrective action means that reasonable measures were used to bring the

error to the attention of those persons likely to have been affected by the original mistake. Accordingly, if the misrepresentation was made during prime television viewing time, the corrective action must be taken during the same viewing time to the same class of viewers. This due diligence test requiring immediate corrective action, therefore, is the federal statute giving rise to error correction notices in Canada (Amirault and Archer, 1977).

The use of corrective advertising in Canada might better be termed 'advertising corrections.' That is, if an incorrect statement appears in an advertisement, an advertising correction notice, appearing under substantially similar circumstances, would generally be expected to qualify under the 'due diligence' test as a defence against false, misleading or deceptive advertising. As a defence, the only requirement of the advertiser is to have the portion of the ad which contained the mistake published or broadcast correctly in the next issue of the publication or during similar programming. This only has to be done once.

#### Past Research

American studies (Hunt, 1973; Dyer and Kuehl, 1974; Mazis and Adkinson, 1974; Kassarian, Carlson and Rosin, 1976) show that there exists conflicting evidence as to whether the use of corrective advertising as a remedy for deceptive advertising is effective in reducing consumer intentions to buy caused by misleading ads. As well, administrative difficulties exist in achieving compliance with corrective advertising orders issued by the FTC which results in long time lags between the date of issue of the order and the date of compliance. These lags can be up to four years, during which time misleading attitudes become deeply entrenched in the minds of consumers and are, therefore, difficult to dislodge.

Sawyer (1976) hypothesized that favorable attitudes caused by misleading ads may reassert themselves over time. Dyer and Kuehl (1978) found evidence of this phenomenon in their research study, providing an indication that the present FTC corrective advertising policies may not be effective.

Wilkie (1974) suggests that the present implication of the corrective advertising remedy by the FTC is imprecise. That is, the specification of an arbitrary time period during which corrective advertisements must run does not ensure the eradication of favorable consumer attitudes caused by misleading ads. He suggests that a reduction in specific consumer beliefs toward a product, which the advertiser would be required to attain regardless of the time it might take to accomplish such a reduction, would improve the system. Problems arise, however, in developing the means by which beliefs could be monitored over time.

Research in Canada is, of course, limited as 'advertising corrections' rather than corrective advertising as a remedy for deceptive advertising is the usual case. In recent years, however, concern has been expressed by consumerists and provincial government agencies over the increasing frequency of advertising corrections (DeVilliers, 1978). As such, Wyckham (1978) undertook an inventory of corrective ads over the 1976 calendar year in the Vancouver Sun and Vancouver Province newspapers. Wyckham's results can be summarized as follows: (1) During 1976, 375 corrective advertisements were found in the two Vancouver dailies; (2) The great majority (84 percent) of the corrections were for advertiser errors, only 16 percent were for newspaper errors; (3) More than 90 percent of the corrections

were placed by retailers, the bulk of these by four large department stores; (4) Price and product descriptions were the most common types of errors corrected; (5) The vast majority of corrections were published within three days of the error; and (6) Corrections were placed about equally in the front and back sections of the newspapers.

A follow-up to the Wyckham study was conducted by Lapp (1979). For this study, Lapp examined all issues of The Windsor Star from January 1, 1977 to June 30, 1978. Over this eighteen month time period, 43 firms placed a total of 248 corrective ads in The Windsor Star. Ninety-one of these ads (37 percent) contained multiple item corrections. The largest number of errors (over 40 percent) involved clothing items. Errors as to price, description, and availability of merchandise accounted for over 88 percent of the correction notices. Approximately 91 percent of the error notices were placed within three days of the error. Over half of the notices (58 percent) were placed in the first section of the newspaper, while 28 percent of the notices were placed adjacent to the firm's regular advertising. Finally, the most common size for the error correction notices was two columns wide by 3 or 4 inches deep.

Recently, Gordon Charles (1979), a project officer in the Marketing Practices Branch of the Federal Ministry of Consumer and Corporate Affairs, surveyed two Ottawa daily newspapers for a three-month period. Charles found 87 separate error correction notices for an average of 29 per month. Nothing beyond this was reported.

#### Methodology

The Wyckham and Lapp newspaper inventories represent the extent of published corrective advertising research in Canada. As such, the present study was undertaken to determine consumer awareness of and attitudes towards corrective advertising in Canada.

The research was undertaken in Windsor, Ontario, a city with a population slightly in excess of 200,000. Telephone interviews were conducted using a structured-nondisguised questionnaire. The questionnaire contained 38 questions, including the demographic data gathered and took approximately 20 minutes to administer. The respondents were selected in a random fashion, using a table of random numbers, from the Windsor Area telephone directory. Respondents had to be at least 18 years of age. In the case of a busy signal or no answer, a maximum of three call backs were made. All interviewing took place during April 1980 and 100 completed interviews were obtained. Refusals and no answers after three call backs resulted in 193 numbers being selected to obtain the 100 interviews. Prior to the survey being undertaken, the questionnaire was pretested on a sample of ten respondents to check for clarity, misleading questions, and feasibility of asking 38 questions via telephone.

#### Findings

The results of this research will be presented here in point/summary form, concentrating on the main findings of the study.

1. The majority of the respondents (59 percent) stated that they had not heard the term "corrective advertising." However, 82 percent of the respondents

indicated that they have seen advertising corrections at some time over the past two years. In fact, most (51 percent) had seen an advertising correction in the past week.

2. When asked, "If a company makes an honest advertising mistake, does it have an option available to remedy that mistake?" 70 percent of the respondents believed that some remedy was available. In fact, 24 percent of the respondents were correctly able to identify that option.
3. Eighty-one percent of the respondents felt that there should be a law requiring advertisers to inform the public when they make an advertising mistake. If the advertising mistake is an honest one and the advertiser informs the public of the mistake, 74 percent of the respondents felt that the advertiser should not be subjected to any additional fine or penalty.
4. The majority of the respondents (51 percent) felt that error corrections should be brought to the attention of the public within one day of the error. An additional 34 percent of the respondents indicated that the error correction should appear as soon as possible after the error has been made.
5. When asked, "How often should the error correction appear?" 33 respondents indicated once, 15 responded twice, 21 felt the error correction should appear three times, 17 felt it should be "as often as is necessary," while 14 gave some other answer.
6. While 51 percent of the respondents felt that advertisers should be required to file a report with the government concerning any advertising errors that they might make, most respondents (66 percent) did not know whether this was currently required or not.
7. Most respondents (70 percent) felt that advertising corrections appeared for stores they normally deal with. This is most likely the case, as the major department stores (who do the most advertising) accounted for a significant proportion of the advertising corrections.
8. When asked about the size of corrective ads, 60 percent of the respondents felt they were too small, 28 percent felt they were the right size, while the remainder had no opinion. Not one respondent felt that the corrective ads were too large. However, 70 percent of the respondents agreed that advertising corrections were "easy to read."
9. When asked who was to blame for advertising errors, the responses were advertisers, media and advertising agencies, in that order.
10. Most respondents (57 percent) felt that advertising corrections were "helpful."
11. Only 5 percent of the respondents held a less favorable opinion of firms that used advertising corrections. On the other hand, 46 percent of the respondents had a more favorable opinion toward these firms. The remainder indicated that their opinion did not change.
12. When asked if newspapers should set aside a specific location for all ad corrections, 65 percent of the respondents were in favor of this. If such a location were not provided, 38 percent of the respondents felt that ad corrections should appear

in the same place as the original ad. The other respondents provided a wide range of opinions.

13. Interestingly, the respondents were almost evenly split as to whether the party responsible for the advertising error should be identified. Thirty-nine percent felt that the party responsible should not be identified, 37 percent felt that the responsible party should be, while 24 percent had no opinion.
14. Finally, an attempt was made to correlate selected demographic characteristics of the respondents with their attitudes/opinions about corrective advertising. However, no meaningful correlations emerged.

#### Discussion

The purpose of this study was to determine the awareness and attitudes of Canadian consumers towards corrective advertising in order to identify the direction the government should take on this important issue.

While the great majority of consumers have seen advertising corrections, they were not familiar with the term "corrective advertising." This may be attributable to the fact that newspapers label corrective ads with the heading "CORRECTION" rather than "ADVERTISING CORRECTION" or "CORRECTIVE ADVERTISEMENT." In addition, less than one-fourth of the respondents were able to identify the option available to advertisers who make an advertising error. This would seem to indicate that most consumers are not aware of the provisions of Sections 36 and 37 of the Combines Investigation Act.

Presently, an advertiser who makes an advertising mistake is only required to correct it in the next publication. The advertiser does not have to submit a report to the government describing the basis of the mistake. This survey indicated that, although most respondents do not know if the advertiser is required to do this, they feel the company should be required to file such a report. If this was necessary, it is felt both advertisers and the media would have to be more cautious in the preparation of advertisements. An error would cause the party responsible for it the time, energy and cost to file the official report.

Currently, it is very easy for an advertiser to make a mistake, temporarily gain some benefits, and place a correction the following day. A report filing procedure would enable the Department of Consumer and Corporate Affairs to maintain a file on advertisers who frequently make ad errors. Steps could then be taken to investigate these advertisers to see if all errors were honest mistakes.

Although a large segment of consumers feel that advertising errors should be brought to the public's attention within one day of the mistake, or otherwise as soon as possible, they also believe that repeating the ad once is sufficient. This contradicts studies conducted by Dyer and Kuehl (1978) and Olson and Dover (1978) in the U.S.

The majority of respondents believed that corrective ads were helpful but too small. The primary reasons for their size would be a matter of economics and the law. Legally, an entire ad does not have to be repeated in an advertising correction, just the portion of the ad that was inaccurate, along with the identity of the advertiser. If the advertiser was at fault, the

the correction is an expense to the advertiser. If the advertising medium was at fault, it costs the medium time/space and the revenue that could have been generated by that time slot or space. As such, corrective ads are generally no larger than necessary as no particular benefit is felt to be derived from them.

Is this always the case, however? Most respondents indicated that they have seen corrective ads from the stores at which they normally shop. Does this discourage them from shopping at these stores? The evidence is that it does not. In fact, the opposite may be the case. This study found that nine times as many respondents indicated that their opinion was more favorable towards advertisers after the appearance of a corrective ad than less favorable. The corrective ad brought about the impression of honesty through admitting openly to a mistake. As such, corrective ads may enhance the consumers' feelings toward the firm. This is an area that required further exploration. If ad corrections have the potential of enhancing the image of firms making the advertising error, it is possible that some other remedy to advertising errors is necessary.

#### Summary

This study has shown that Canadian consumers are not aware of the provisions of Sections 36 and 37 of the Combines Investigation Act. This situation is attributable to the lack of funds available to the Department of Consumer and Corporate Affairs to educate the public plus the lack of media exposure given to deceptive advertising cases as many of these advertisers are heavy media users.

A major revelation from this study is that consumers tend to view a firm that makes use of an advertising correction more favorably. As a consequence, it might be hypothesized that a firm that frequently used corrective advertising could enhance its image with the public. Thus, the firm could get the benefit of the advertising error to draw traffic and create a favorable image by afterwards admitting to the error.

At this time, it seems appropriate that two studies should be undertaken. The first should examine consumer attitudes towards firms that make use of corrective advertisements to confirm or reject the findings of this study. The second should measure the attitudes of consumers towards firms identified in the advertising correction as being responsible for the error. If it is shown that identifying the party responsible for the error is detrimental, maybe identification should be required. This would serve to overcome the temporary benefits gained through the advertising error.

Finally, Canadian regulators should be closely monitoring the evolution of corrective advertising regulation in the United States. Recent FTC actions and their outcomes may provide insight to Canadian regulators as to appropriate courses of action.

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A SIMULATION STUDY OF THE RELATIONSHIP BETWEEN  
ADVERTISING AND SELLER CONCENTRATION

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Abstract

This experiment tests a model of the effects of advertising on firm and industry profitability which argues that, under certain circumstances, advertising will be greater and profits less in less concentrated than more concentrated industries. This is the opposite of the hypothesis normally advanced by economists. The general hypothesis, but not the specific numerical predictions, was supported.

Introduction

Several years ago I wrote a paper which used as its core concept a modification of the classic Prisoner's Dilemma problem to argue that under certain circumstances an "industry would tend to distribute its (potential) profits to advertising as a direct monotonic function of the number of firms in the industry" [Horton, 1955]. This conclusion, which is the opposite of what economists normally predict, is a straightforward mathematical deduction based on some widely held beliefs regarding the role of advertising in distributing profits within certain, especially oligopolistic, industries and the competitive assumptions under which firms make their advertising decisions.

Although some highly selective data using advertising to sales as a surrogate for profit were offered as partial empirical support for the Prisoner's Dilemma model this earlier paper was essentially theoretical. This study attempts to partially validate the Prisoner's Dilemma model of the advertising decision via a simulation experiment.

A Review of the Model

This section briefly reviews the very simplified model of the advertising decision which is suggested by the Prisoner's Dilemma problem. For a more detailed discussion see.\*

The model is as follows: Assume that some portion of total industry profits (P), excluding advertising expenditures (A), are fixed and distributed to the n firms which comprise the industry in direct proportion to each firm's advertising share. Then profits for the ith firm are

$$\pi_i = \frac{A_i}{\sum_{j \neq i} A_j + A_i} P - A_i \quad (1)$$

and an optimal decision rule for the ith firm is<sup>1</sup>

$$A_i = \sqrt{(\sum A_j) P} - A_j \quad (2)$$

It is assumed that should no firm advertise each firm

receives an equal share of the profit pool (P).

The firm's advertising decision then depends on P, which is assumed constant, and  $\sum A_j$ , the advertising expenditure of all other firms in the industry. To arrive at a specific optimal advertising decision the firm must make some assumption about  $\sum A_j$ . One assumption which is often encountered in both the marketing and economic literature is that each firm assumes that in the long run every other firm in the industry will match their advertising expenditures. For our rather simple model it is assumed that this matching is on a dollar-for-dollar basis. Under these circumstances the optimal decision rule for the ith firm is

$$A_i = \left[ \frac{n-1}{n} \right] P \quad (3)$$

and total advertising expenditures will equal

$$\left[ \frac{n^2 - n}{n^2} \right] P \quad (4)$$

Thus, under the conditions posited, the industry will tend to distribute its potential profits (P) to advertising as a direct monotonic function of the number of firms in the industry.

Note that the results predicted by equations (3) and (4) depend on two distinct assumptions: (1) that profits are distributed to firms according to equation (1) and (2) that each firm assumes that all other firms will match their advertising expenditures. Since our simulated environment will embody the first assumption it is only the latter assumption which is of interest in this experiment. The logical alternative to this assumption, of course, is that firms collude, spend nothing on advertising and split P equally.

Methodology

A computer marketing game was constructed to test the relationships among advertising, profits, and seller concentration predicted by equations (3) and (4). Subjects were 145 students in the author's undergraduate introductory marketing course. Each student represented one firm and firms were placed into 2, 4, 6, and 8 firm industries. There was also one 9 firm industry which was composed of students entering the course late. Data for this one 9 firm industry is presented in the results section but is excluded from the statistical analysis. After two warm up decisions the simulation was restarted and students made 10 consecutive sets of decisions on a once per week schedule. Students were informed that their performance would be judged on cumulative profits over the 10 week period and that the simulation was worth 10 percent of their course grade.

The problem facing each firm was to determine a profit maximizing marketing mix. The cost side of the profit equation was kept deliberately simple and certain. Fixed costs were \$38,000 per period and each unit sold

\*This rule assumes that profits attributable to advertising are independent of the firm's other decisions.

cost \$100. No other production or inventory costs were included in the model. Thus once a firm forecasted its estimated quantity sold, as a function of its market mix decisions, its costs and profit were also identified.

The marketing mix consisted of price, distribution, product quality, and advertising. Quantity sold due to advertising was calculated separately from the other marketing mix elements. Quantity sold due to these other marketing mix decisions was calculated according to a constant elasticity of demand equation which is discussed in detail by Kotler. For our purposes we can simply note that this demand equation contains no competitive effects and has a known profit maximizing solution.

In accordance with the requirements of the theoretical model profits attributable to the firm's advertising decision were distributed according to each firm's advertising share for its industry. Since student grades were dependent upon their profit performance it was deemed desirable that firms in industries of different sizes should receive the same profits when all firms make the same dollar advertising decisions. This was felt to be especially important for the benchmark case where no firm advertises. Using this logic the potential period profit pool for each industry was set at  $n \cdot \$16,335$ , where  $n$  is the number of firms in the industry. Assuming an optimal marketing mix, including zero advertising, the profits attributable to advertising are approximately 20 percent of total firm profits.\* Increasing the potential profit pool in proportion to the number of firms in the industry produces certain changes in equations (3) and (4) but does not alter the basic prediction that firms will transfer their potential profits to advertising as a direct function of the number of firms in the industry. More specifically, equations (3) and (4) predict that both firm and industry advertising will be greater in less concentrated industries, that total industry profits will be \$16,335 per period and since the less concentrated the industry the greater the number of firms these profits will be divided among firm profits will be less in less concentrated industries.

Although profits attributable to advertising were calculated separately from profits attributable to other marketing mix decisions firms received only a single combined figure for period and cumulative profits. Firms also received each period a statement of price for each firm and average firm expenditures for each industry for the remaining marketing mix variables. Finally, firms knew how many firms were in each industry but were not told how this affected their profits.

## Results

Table 1 presents the results of the analysis of the level of cumulative firm profits attributable to the firm's advertising decisions.\*\* The general hypothesis

\*Since it is quite likely that the size of profits due advertising relative to total firm profits would affect firms' behavior it would have been desirable to include this factor in the experiment. The available pool of subjects, however, would not permit this factor to be included in the experimental design.

\*\*Since the sum of profits attributable to advertising and advertising for any industry is a constant, a finding that average firm profits decline with decreasing industry concentration implies that potential profits are being transferred to advertising.

TABLE 1  
FIRM CUMULATIVE PROFITS AS A  
FUNCTION OF INDUSTRY SIZE

### I. Descriptive Data

Number of Firms in Industry	Number of Firms	Mean Profits Due Advertising	Range of Profits Due Advertising	
			Minimum	Maximum
2	14	- 27,205	-439,538	73,423
4	32	- 55,311	-182,381	12,071
6	42	- 83,612	-266,971	- 1,217
8	48	-109,199	-328,785	- 8,630
9	9	- 53,042	- 72,272	-33,739
Grand Mean	145	- 76,262		

### II. Analysis of Variance\*

Source of Variation	Degrees of Freedom	F Ratio	Eta
Number of Firms in Industry	3	7.17**	.374
Error	132		

\*Excluding one industry with 9 firms.

\*\*Significant at .001.

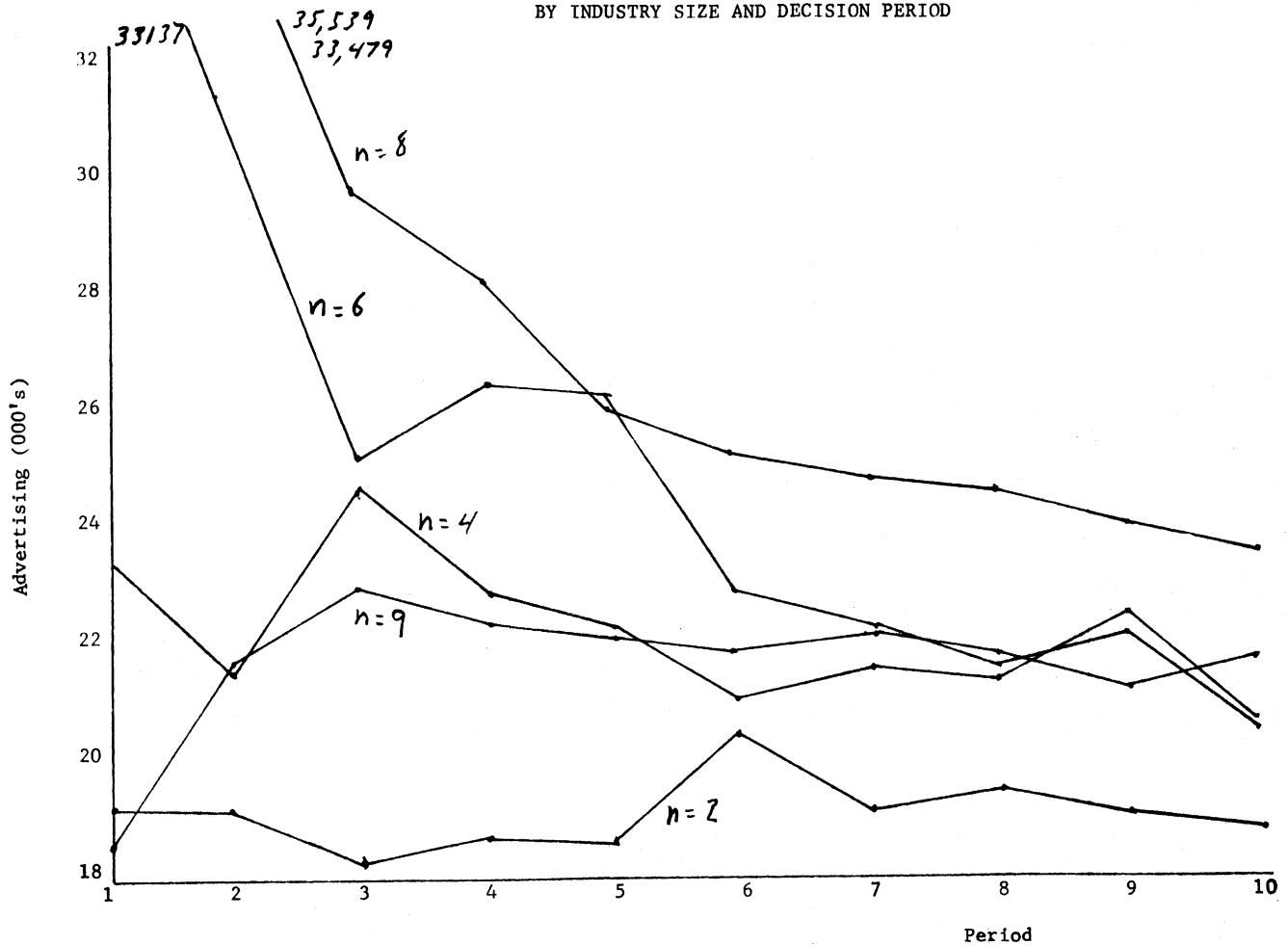
that profits will be lower in larger industries is strongly supported. In all industry sizes, however, average firm profits from advertising decisions were negative. Indeed, over most of the simulation the advertising expenditures were at such a level that almost all firms would have maximized profits, assuming their competitors did not alter their advertising expenditures, by spending nothing on advertising.

This lemming like behavior of firms with respect to the advertising decision is in marked contrast to the behavior of firms in making all other marketing mix decisions. Over the 10 decision periods average firm profits attributable to non-advertising decisions were approximately 84 percent of maximum attainable profits. The level of these non-advertising profits were unrelated to industry concentration ( $F = .18$ ,  $\alpha > .9$ ) and the two components of total firm profit were not correlated ( $r = -.002$ ).

Figure 1 places a somewhat different perspective on the data by displaying average advertising expenditures per firm for different size industries over the 10 decision periods. Figure 1 reveals a number of interesting behavior patterns. First, is the rather large advertising differences among industries of different sizes in the early decision periods. Second is the difference in the slope of the advertising expenditures over time for industries of different sizes. With the exception of period six the line for two firm industries is virtually flat. For the eight, and the one nine, firm industries there is a very sharp fall over the first few periods. For the four and six firm industries there is a tendency for advertising expenditures to rise initially and then decline very slightly over the remaining periods. Third, by period 10 the different size industries are clustered in three groups with eight firm industries spending far more than two firm industries on advertising. The one nine firm industry is grouped with the four and six firm industries at an intermediate advertising level. Finally, it appears that two firm industries, and possibly four and six firm industries, have reached an essentially stable rate of advertising. The eight firm industries, however, are clearly continuing to decrease their rate of



FIGURE 1  
AVERAGE FIRM ADVERTISING EXPENDITURES  
BY INDUSTRY SIZE AND DECISION PERIOD



advertising expenditures. Whether they would eventually reach the advertising level of more concentrated industries unfortunately cannot be predicted.

#### Discussion

The data clearly support the general form of the relationship between industry concentration and industry profitability. It is equally clear, however, that the specific predictions of the model failed to be confirmed. The magnitude of the overexpenditure on advertising is surprising. One index of the magnitude of this overspending is quite revealing. From equation (2) we can calculate the optimal advertising expenditure for each firm. This, of course, presumes knowledge which the firms could possess only approximately at best. Even so most firms could have increased their total profits by simply reducing their advertising expenditures to zero. The specific figures, with industry size indicated in parenthesis, are 7% (2), 50% (4), 67% (6), 84% (8), and 100% (9).

Obviously, there are many potential explanations for the results obtained. Part of the explanation is very likely due to the use of undergraduate students enrolled in a marketing course. Part of the explanation may be due to the specific levels chosen for the parameters of the model, e.g., size of the potential profits from advertising, specific industry sizes investigated, and the specific procedures and conditions under which the experiment was conducted.

In spite of these limitations the experiment lends additional support to the hypothesis that, under certain conditions, more concentrated industries will spend less on advertising whose only purpose is to distribute profits to firms.

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COMPARATIVE ANALYSIS OF ADVERTISING AGENCY  
SYSTEMS IN MULTIPLE ENVIRONMENTS

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Abstract

TABLE 1

The purpose of this paper is to compare the role and functions of advertising agencies and client relationships in Turkey and Canada. The paucity of cross-cultural studies in advertising seemed to indicate a large potential gain from pursuing such studies as the present one. The two countries represent different stages of development. It is hoped that this study contributes to our understanding of advertising agency-client relationships such that advertising management in the two sample countries can be more effective.

REPORTED MEASURED MEDIA  
ADVERTISING EXPENDITURES(a)  
(IN MILLIONS OF U.S. DOLLARS)

	1968	1970	1972
Canada	623.2(b)	762.7(b)	908.5(b)
Turkey	43.5	41.2	62.0
	1974	1976	1977
	1.246.2(b)	1.737.3(b)	1.699.8(b)
	138.4	209.0	107.0

Introduction

Advertising as it is practiced in Turkey today is in a stage of rapid development as evidenced by the increased number of agencies and total billings in the last decade. In fact, the broader function of marketing management, of which advertising and promotion are an integral part has been accepted as a top managerial activity by a limited number of companies only within the last decade. Whereas in Canada, advertising has received significant attention as a managerial function since the end of World War II. For instance, in 1950 Canadian advertising revenues were \$235 million and represented 1.2% of the GNP. Today, advertising revenues approached \$3,753 million and represents 1.3% of the total GNP. Canada ranks sixth in total advertising expenditures behind the United States, Japan, West Germany, the United Kingdom and France. However, on a per capita basis, Canada ranks third behind the United States and Switzerland (MacLean-Hunter, 1978).

The emerging pattern in allocation of advertising expenditures is the pronounced rise in the level of expenditures as a percentage of the GNP in the low-income countries compared to the high-income ones (Hornik, 1979). In the former one, advertising expenditures generally run about 1% of the national income, while at the upper end it approaches 3%. Furthermore, many of the expenditure ratios are indicative of the systematic relations between economic development and advertising. It is firmly established that advertising expenditures are lower in developing countries than in the economically more advanced countries. This generalization holds in terms of both per capita advertising expenditures and advertising as a percentage of Gross National Product (Simon, 1970). Table 1 shows comparative figures of advertising expenditures for Turkey and Canada over a period of ten years (Starch Inra Hooper, 1979).

There is a progression in the structural aspects of marketing that causes the differences in the overall level of expenditures. For example, one country, Turkey, is developing whereas Canada is developed and per capita income of Turkey in 1977 was \$1281 compared to

(a) advertising expenditures in print, "outdoor and Transportation", cinema, radio and television, where these media are available for advertising.

(b) expenditures for cinema not reported.

\$8,970 per capita income in Canada. Furthermore, in the same year, advertising expenditures in Turkey totalled \$107 million compared to Canada where it was \$1,700 billion. In 1977, per capita advertising expenditures in Canada was \$99.00 whereas the corresponding figure for Turkey was \$3.51. The relationship of advertising expenditure to the GNP is 1.3% and 0.32% respectively.

In less-developed countries like Turkey, goods are purchased and marketed to meet a limited group of known needs and the prevailing seller's market conditions do not stimulate the need for advertising on the part of the sellers. Under such conditions, firms in these countries may be tempted to let their products sell themselves and they see relatively little need for advertising. In a developed country like Canada, however, these conditions change, creating the needs for advertising. Buyers have enough money as well as the intention to be selective in their purchasing, so advertising is used to influence them to buy the output of a particular maker. The purpose of advertising in a developed economy like Canada is to create brand insistence for products of a particular manufacturer or seller. When the producer is separated from the consumer by widening levels of middlemen, the producer often turns to advertising to stimulate demand. As products increase in complexity, buyers seek information to help them in their decision making. Consequently, sellers employ advertising to present facts and arguments to the consumer (James and Lister, 1980).

There are benefits to be derived from a comparative study of advertising utilizing developing and a developed economy. Such benefits can transcend themselves into more effective macro-managerial advertising decision making in both countries. The tremendous growth in international business represents one of the most dramatic and significant world events of the last decade. Hence, marketers have shown an abiding

interest in their international advertising performance. Firms, in their desire for expansion and faster growth, often move from developed to developing countries. However, such firms must be conscience of the differences and the degree of adaptation required to make the advertising in one country acceptable in another.

#### Background

It has been argued that there is a close similarity of Turkish TV commercials to those of Western countries including Canada(Karp and Gorlick, 1974). This similarity lies partly in the themes used in advertisements and partly in the techniques of presentation. Intuitively, one would have expected these two aspects of advertising to be different in two different socio-economic and cultural environments. However, similarities might be explained by the fact that most Turkish advertising agency owners and/or managers were American educated; thus, they have developed advertising themes, copy and gimmicks similar to the ones used in North America(Yavas and Rountree, 1980).

Whether in a developed or developing economy advertising seeks to perform certain basic functions. These include informing, influencing and persuading. Therefore, the larger meaning conveyed to most people is that receivers of any advertising message, however different their cultures and traditions may be, seek to improve their knowledge of the company and its products to facilitate their decision making. For this reason, a major challenge for Turkish and Canadian businessmen is to devise increasingly more efficient ways of informing consumers about products and services, increase the efficiency of the exchange transaction process and deliver an improved standard of living to society. In this process of transformation, the role of advertising is to bridge the communication gap between consumers and the businessmen. Themes and technique of presentation are augmented in this task by good advertising agency-client relationships.

Companies which manufacture goods for sale in a developing country like Turkey have naturally made use of promotional techniques which have originated elsewhere. In practice, the techniques of promotion have been applied by multinational companies in environments different from those in which they were initially developed. In a less-developed environment like Turkey, the consumer is likely to be more affected by individual brand promotions, whether in the form of advertising, personal selling or point of purchase display, than his counterpart in a more wealthy society like Canada where consumers have developed a certain skepticism about advertising.

#### Research Methodology

This descriptive research study compares advertising agency-client relationships in two diverse cultures. The paucity of comparative studies in advertising seemed to indicate a large potential gain from pursuing such studies as the present one. The two countries

involved represent different stages of socio-economic, cultural, technological, marketing and advertising development. It is hoped that this study will contribute to our understanding of advertising agency-client relationships such that advertising management in the two countries can be more effective.

The data for the Turkish part of the study were collected in the summer of 1979 in the two largest cities of Turkey namely Istanbul and Ankara. Extensive interviews were held with owners and/or managers of the four leading advertising agencies of Turkey which accounts for more than 65% of the total billings.\* Additional information was gathered from the Turkish Advertising Association and the State Planning Organization. Canadian data were collected in 1979-80 from various sources including the four largest advertising agencies.\*\*

#### Functions of Advertising in a Developing And a Developed Economy

One of the definitions of the word marketing is the delivery of a standard of living to society(McCarthy, 1979). In the same spirit, advertising may be defined inter alia as the means by which, through the mass media, messages about higher standards of living are communicated to society. Both functions may be viewed as positive forces for the betterment and advancement of people's lives and in the building, strengthening, and modernizing of a nation(Hendon, 1975). However, from a business perspective, advertising has different impacts on individuals in the two countries studied. Different impacts arise from differences in stages of development and affluence in the respective countries and the needs of the people.

As a country such as Turkey moves from a stage of underdevelopment to a stage of development such as in Canada's case, a need develops for the public to be informed about what companies exist and the products they produce(Karp and Gorlick, 1974). Because of the prevailing sellers' market conditions in Turkey, many private and public companies do not advertise at all. They trust individual salesmen to carry out the whole marketing function on their own, unlike in Canada. The reason for this difference is that source credibility looms larger in the decision process of consumers in less-developed countries where each decision assumes a higher risk and consequently the fear of failure is greater. Many Turkish companies which do advertise, unlike many Canadian companies, have no clear goals. They have no precise sense of what their advertisements are designed to accomplish or the part

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\*The four leading Turkish advertising agencies are Ilancilik, Yeni Ajans, Manajans and Moran.

\*\*The four leading Canadian advertising agencies are MacLaren, J. Walter Thompson, Foster Advertising and Cockfield Brown.

they are to play in a marketing and promotional program. The type of advertising copy used by most Turkish companies does not really tell what the products cost, where they can be obtained, what the consumer is to do with them or what their quality is (Mesci, 1974). This is due to the production stage of marketing in Turkey where the emphasis is on generic products and the demand for most consumer and industrial products exceeds the total supply. Competition is not as fierce as it is in Canada where there is great differentiation of products which are assisted in this process by advertising.

In developed countries such as Canada, advertising copy in general contains more writing and technical information due to a higher level of literacy and education. On the other hand, in developing countries such as Turkey, advertising copy contains very few technical arguments. There are a number of reasons pertaining to this fact. Comparative shopping practices are very low in Turkey and the general level of education is not high. Unlike in Canada, most of the advertising copy used by the Turkish agencies are persuasive in nature rather than being informative. However, there is a movement for more information in company advertising dealing with product content and labelling. This has caused a decline in comparative advertising and an increase in informative advertising. This illustrates that most Turkish advertising agencies do not appreciate fully the expectations and needs of people on the receiving end of their messages. Consequently, advertising is often misdirected and the target audience is not reached efficiently.

#### Structure of Turkish and Canadian Advertising Agencies

Whereas advertising agencies in Turkey are classified as commission agents by the Turkish Chambers of Commerce; in Canada, there is no official body which classifies an advertising agency in a similar manner. However, Canadian advertising agencies operate both on a commission and fee basis. In Turkey, advertising agencies concentrate solely on the advertising function whereas in Canada advertising agencies also perform certain ancillary functions to advertising such as market research and a fairly well rounded variety of services. These ancillary functions are more prevalent in the case of larger Canadian advertising agencies. This indicates that advertising agencies in Turkey are still at an early stage of development and more important it indicates the greater impact of regulation in the case of Turkey (Milton, 1976).

In Turkey, advertising agencies are generally concentrated in the largest cities where some 80 per cent of the manufacturing activities take place. Whereas in Canada advertising agencies are found in areas of market concentration. In 1961, there were some ten advertising agencies operating in Turkey in addition to forty radio time and press space buyers. In addition to this, there were artists' studios for illustrations and sign production which included all the facilities for making neon signs. During this early period, most of the large Turkish companies,

both private and public, prepared their advertising copy themselves and relied on advertising agencies to a limited degree. The Turkish Press Advertising Authority (Basin Reklam Kurumu) was established by law in 1960 to assume control over the allocation of state advertising in the press.

Today, advertising practices, as an organized activity, is in a process of rapid change and the number of advertising agencies has proliferated in the last decade. There are now at least fifty specialized advertising agencies carrying out the advertising activity and capable of fully satisfying the needs of any firm which wants their goods or services advertised. The current (1977-1978) Istanbul Telephone Directory lists in the yellow pages the names of ninety-seven firms under the title of advertising agencies. The number for Ankara, the Capital, is seventy-six. Also included in this number are the firms that deal exclusively with radio advertising, serigraphy, outdoor billboard production, film/slide production for cinema advertising and small scale commission-based on firms that place classified ads in the newspapers. In 1977, for example, 90 per cent of the total 815 million T.L. worth of press advertising was billed by only nine leading advertising agencies of Turkey. Of the total 815 million T.L. press advertising, government advertisements summed 26%, classified advertisements 3%, and the commercial advertisements accounted for 71%.

In Canada, Standard Industrial Classification under advertising agencies include billboard and outdoor display services, advertising on transportation facilities, sign painters, commercial artists and direct mail and door-to-door advertising firms. In 1960, there were some 131 advertising agencies operating in Canada. Today, there are over 300 agencies operating in Canada which produced a total of \$3,753 million dollars worth of gross revenues in 1980 (MacLean-Hunter, 1980). The transnational advertising agencies have moved into and virtually taken over the advertising markets in most provinces of Canada. Furthermore, the rapid growth in advertising activity has meant heavy pressures on the mass media which serve as the critical link between the manufacturers and the eyes and ears of the consumer. The expansion of production and advertising budgets surpassed the available time and space in the media. Media costs are driven up, leaving the transnationals as the major buyers of valuable media time and space (Janus and Roncagliolo, 1979).

#### Performance of Advertising Agencies in Turkey and Canada

The four leading Turkish advertising agency managers interviewed believe that advertising is defined often by their clients as originality, novelty or something new and different. However, this has little connection with the overall objectives of their company's advertising policies. Thus, Turkish advertising clients often confuse mere novelty with sound marketing communication. Creativity in advertising is linked to benefits sought by the consumer, not what appeals to the advertiser

seeking advertisements that simply look different or startling. Canadian advertising agency managers are very concerned with the effectiveness and efficiency of advertising as opposed to mere novelty in advertising.

Some executive members of the Turkish Advertising Association have indicated that many companies' advertising and marketing policies are unduly conservative. That is, they are apt to advertise only if their competitors do and/or in the manner of their rivals. The lack of independent advertising initiative among some Turkish businessmen seems to suggest one reason for the high product mortality and business failure among indigenous businesses in Turkey which do not try to differentiate themselves or their products. For this reason, advertisements of the future in less-developed countries should be informative in nature but limited to company and the benefits it provides (Leff and Farley, 1980).

Whereas in Turkey advertising agencies are directed and managed mostly by a single proprietor, in Canada advertising agencies are part of large multinational advertising units. Recently, with increased specialization and division of labour in the manufacturing sector of Turkey, advertising agencies have realized that they must plan and coordinate their activities to maintain their volume of business. In the early stages this movement was rather slow and advertising agencies had functional specialization of technical and administrative activities. Today, one could easily observe the improved specialization in the activities of large Turkish advertising agencies like Man-Ajans and Fulmar along functional and product lines. Perhaps in the future as the economy develops and very large companies emerge, one could expect specialization along customer lines also, as is the case in developed countries like Canada.

Whereas competition for clients among advertising agencies in Canada is fierce, most advertising agencies in Turkey get more business than they can handle. Turkish agencies try to maintain the status quo and are not interested in growth opportunities. This attitude is explained for the most part by the constraints imposed by the Turkish Radio and Television Authority, a semi-government agency which fixes the total advertising time allotment for each advertising agency on its sponsored and spot announcement advertising programs. For instance, each advertising agency is only allowed to place a maximum of ten minutes in any advertising network.

#### Advertising Agencies - Client Relationships

Advertising agencies use one of three different methods in obtaining their advertising jobs. These are: a) Advertising agency finds the client, b) The client comes to an advertising agency, c) Sub-contracting. However, there are differences in the mix of these three factors in the two countries. In Turkey, most advertising companies use a combination of these methods. The sub-contracting system is used when the agency which had obtained the job originally does not have the specific time and media program slot which

is desired by the client. In this case, another advertising agency which has the advertising time in that slot is given the job. This is different in Canada where the Canadian Radio and Television Corporation might stipulate the total advertising time but not the allocation of that time among advertisers.

Large Turkish advertising agencies are the only ones able to place advertisements directly with the mass media because of a size requirement for direct placement. These agencies accept notes from clients but pay in cash to the media owners. The agencies receive a rebate from the media in proportion to the quantity and size of the advertisements placed. In the division of the commission which generally amounts to 25% the large agencies, who alone are allowed to place advertisements directly, retain 5-10% of the commission and pass on 15-20% of the rebate to the small member agencies who had received the original assignment. Nevertheless, these may, in turn, allow a rebate to the advertisers. While the smaller agencies through this system are assured of 15-20% commission which would not have been received otherwise, major agencies nevertheless get an extra 5-10% commission on a ready copy. The system provides the major agencies with a number of new accounts, frequent appearances on mass media and consequently a certain degree of dominance in the market. This system persists through passing rebates down the line in a form of a hierarchy; thereby enabling agencies at the bottom to work with little or no capital. This creates a potentially dangerous chain of financial dependence. Advertisers, of course, perform other services in which case they charge for services rendered on a cost-plus-fee basis. In Canada, on the other hand, there is some sub-contracting of work but not as extensive as in Turkey where the size constraint operates.

In order to achieve the advertising goals of the client, there has to be a very good coordination and effective communication between the advertising agency and its client. When we look at the relationships from a client's perspective, most advertising clients in Turkey require low cost advertising and want to see the immediate positive effect of advertising on their companies' sales. The expectations of clients both in Turkey and Canada is that the advertising expenditures and programs would increase their sales. However, there is a difference in the time factor of this expectation, that is, Turkish companies expect immediate results whereas Canadians, being more knowledgeable about advertising and having more experience with it, are not as obsessed with the immediacy of the results except in special cases. Thus, advertising campaigns which have a longer time dimension are more prevalent in Canada than in Turkey.

According to the latest report of the Turkish advertising agencies, most advertising agency executives believe that Turkish advertising clients should have a clearer idea of whom they are trying to reach, the composition of their markets and media audience (Gorus, 1978).

Many Turkish advertising clients do not know what their advertising is going to achieve in the market place. In Canada, the clients are much more definite about what they want their advertising to achieve and they have a much clearer view of their customers. Their advertising plan and program are derived from their larger marketing plans.

Services Offered By Turkish and Canadian Advertising Agencies

In the development of advertising agency systems, there seems to be a life-cycle phenomenon (Mitchell, 1979) whereby agencies go through a three-stage process. These stages are: boutique type agency stage, specialty type agency and full-service agency stage. The first, boutique stage consists of small agencies entering the market to provide a specific function that being the creation of advertisements. The second stage involves an expansion of the service to include not only the creation of the message but also the placement of it. The final stage involves even more activities covering the market such as marketing research, testing of concepts and consumer profile analysis. The full-service agencies may have specialty type departments as well as boutiques (Figure 1).

When we examine the so-called life-cycle phenomenon of advertising, Canadian and U.S. advertisers seem to follow a "specialty shop-full-service agency-specialty shop" trend, the latter stage being manifested through the shift of advertisers to creative boutiques and the like. When the cycle is expanded by comparing it to the apparent trend in Turkey and other developing countries we see that advertisers are set to follow the full circle rather than skip the "full-service agency" step.

One would expect that a large advertising agency, given the size, managerial expertise and research capabilities, would be qualified to advise and assist the client concerning the specifications of distinct qualities for any product as well as the marketing strategies to adopt. In a study by Deligonul (1980) 51% of Turkish advertising agencies contacted indicated that they studied clients' products fully in order to determine their distinct advertisable qualities. Thirty-five percent of the agencies reported that they studied market positions of rival products and 45% of the agencies reported that they conducted activities to study present markets.

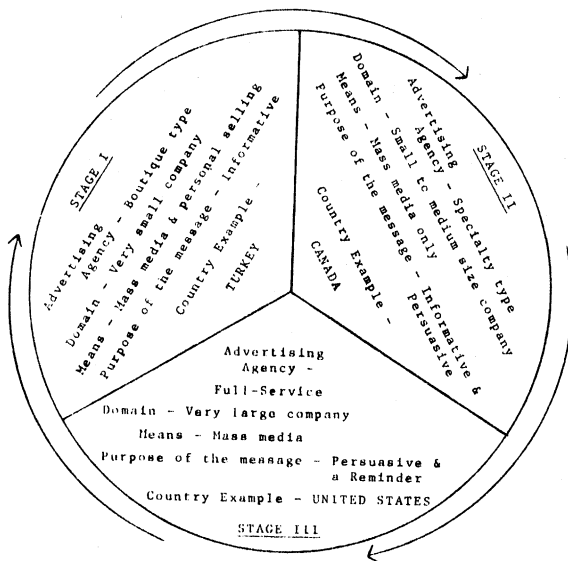
Both in Turkey and in Canada, the effectiveness in planning an advertising campaign is heavily dependent on the quality of findings and analysis of the research and studies to which reference has already been made. This information helps not only in the formulation of a campaign plan but also in other areas of marketing. Therefore, it is essential for the advertiser and the advertising agency alike to take responsibility and to work in close collaboration to maintain the flow of high quality information. This had been a moot point not too long ago, since the research methods utilized by the Turkish agencies generally involve simple analysis of secondary data or simple tests conducted in local, small scale panels. Some large Turkish advertisers however, have redeemed themselves from this deficiency by subscribing to marketing research programs carried out by independent marketing research companies. In Deligonul's study (1980), it was reported that all advertising agencies drew up campaign plans complete with schedules, timings and estimated costs.

Almost all Turkish advertising agencies provide creative services. These cover not only copy writing, designing, layouts, typography and script writing but also point-of-sale displays, exhibitions, package designing, and other similar activities. About 10% of the Turkish advertising agencies have the resources and facilities to offer full production service in a way such that they can carry out all phases of production from beginning to completion. It is generally believed that the quality of the creative services in Turkish agencies has improved since the establishment of an Advertising Department in the Academy of Fine Arts. This class of services is the main one Turkish agencies hope to emphasize to clients.

It is very important that an advertising agency should be in a position to give the advertiser unbiased advice on the choice of media best suited to meet the client's specific goals. Ninety percent of the agencies reported that they had an adequate knowledge of the media. However, their "knowledge" was based largely on past experience and intuitive evaluation. Turkish agencies offered services on arrangement of the booking and purchase of time and space. Also, 85% of the agencies offered services which included routine matters of voucher checking and arranging payments direct to media suppliers. Some 80% of the advertising agencies supervised, checked and verified advertising campaign

FIGURE 1

LIFE-CYCLE PHENOMENA OF ADVERTISING AGENCIES IN DIVERSE CULTURES





implementation.

When we look at the system in Canada, almost every agency admitted having adequate knowledge of the media. Canadian advertising agencies collect the billings and remit the appropriate amounts to the media.

#### Summary and Conclusions

In general, it would seem that there are some factors which should account for differences in advertising agencies-client relationships in a developing and developed economy. However, these differences, although significant in absolute terms, were not as large in relative terms. This was in part accounted for by what might be considered a contamination factor or demonstration effect resulting from Turkish advertising agency manager's and/or owner's North American education. Nevertheless, there were differences in terms of certain advertising functions performed and the attitude of businessmen in the two countries to the practice of advertising.

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THE USE OF BLACKS IN MAGAZINE ADVERTISING:  
SOME CHANGES IN THE 1970 to 1980 PERIOD

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Abstract

The black consumer is becoming increasingly important to marketers of consumer products. This importance can be seen in increases in numbers of black consumers as well as in increases in their discretionary purchasing power. To determine if these increases are resulting in greater use of black models in advertisements appearing in mass circulation magazines, a study was conducted on print media for the years 1970, 1975 and 1980. Additional issues examined in the study were the roles depicted by blacks in subject ads, and the products with which they were associated. The findings indicate that although blacks are now portrayed more frequently than in the past, marketers continue to underplay the significance of this important consumer segment.

Introduction

The economic importance of black Americans as a consumer group should not be overlooked given recent population and socioeconomic developments [11]. In 1978 there were over 25 million black Americans with an aggregate personal income of almost \$70 billion. This represents 11.7 percent of the population, the largest non-white segment, and 15.0 percent of the U. S. personal income for 1978 [10]. Moreover, population growth in this market segment has exhibited a steady growth pattern since 1950 [10].

Black consumers are an especially important group to manufacturers of products such as cooked cereals, syrup, soft drinks, alcoholic beverages, clothing, shoes, and canned luncheon meat, since they purchase these products out of proportion to their numbers. Moreover, the black consumer tends to be more brand conscious than other consumer groups, favoring more popular brands in the product class, and more brand loyal [1]. These characteristics combined with increases in population and purchasing power of the black consumer serve to emphasize the importance of developing marketing communications that are able to reach and influence this market segment.

In developing advertising for the black segment, previous research emphasizes that importance of using black role models [2, 5, 7]. This finding appears to be generalizable to both TV and print advertising. Specifically, Gibson [5] and Choudhury and Schmidt [2] found that the use of black models in print ads is so important that it may determine to a great degree who gets the black segment of the market. Likewise, Schlinger and Plummer suggests that TV "commercials which use black models are more meaningful to black viewers than all-white commercials. Black respondents clearly favored the black-cast commercial over the white-cast commercial; they appeared to emphathize more with the characters and to react more positively to the advertised brand." [7, p.153] Moreover, two of the studies observed no adverse affect of the use of black role models on the white market [2, 7].

Although black role models appear to be important in effectively directing marketing communications to the black market segment, previous research indicates that

few advertisements employ black models and that those that do, portray blacks in low status roles. Specifically Shuey, King and Griffith [8] observing advertisements in six mass circulation magazines from 1940 to 1950 found that black models represented less than one percent of all advertisements and that 80 percent of the blacks pictured were portrayed as cooks, maids and servants.

Cox [4] in a partial replication of the Shuey, King and Griffith [8] study considered magazine advertising during the period 1967 to 1968. He found that while the number of advertisements portraying blacks had changed little (i.e. from one percent to two percent) since 1950, the role of the black had changed. Specifically, he observed more than 55 percent of the black adults in entertainer, sportsman, professional, business, student or clerical roles. However when the Cox study was replicated by Colfax and Sternberg [3] in 1970, they found that 40 percent of the blacks pictured in the advertisements were on record album covers. The other black models were portrayed most often as "token blacks", children or welfare/charity recipients.

Kassarjian [6] in 1969 considered advertising in mass circulation magazines from 1946 to 1965. He observed a U-shaped frequency of blacks in advertisements. That is, the use of blacks in advertisements declined in 1956 and increased in 1965 but only to its 1946 level. However, he found that blacks were portrayed with higher occupational status even though they were "seldom found in conventional middle-class settings" [6, p.29].

Finally, Stutts and Pride in a partial replication of the Kassarjian study found that advertisements using black models increased significantly from 1965 to 1970 but then leveled off. [9, p. 261] However, they did not consider the role of the black model in the observed advertisements during the 1965 to 1970 period.

To determine the present status of blacks in print media advertising, a study was undertaken as described below. The purposes of this study were:

1. To determine the frequency of use of black models in mass circulation magazine advertising.
2. To determine the role depicted by the black models in print advertising.
3. To determine if advertising using black models is associated with a particular product or service.

Methodology

The mass circulation consumer magazines selected for this study were Better Homes and Gardens, Reader's Digest, Sports Illustrated, and Times. They were selected because of their availability over the period of the study, 1970-1980, and because of their high circulation and broad segment appeal.

All advertisements in each magazine were reviewed quarterly for the years 1970, 1975, and 1980. In the case of the monthly publications, the issues reviewed were January, March, June and October. These months were selected to avoid issues with abnormally high and non-representative advertising frequencies such as pre-holiday, back-to-school, and so forth. In the case of Time, the first weekly issue in the subject month was viewed.

All advertisements that included people in the selected media, were viewed. Drawings, cartoons, and pictorial ads not including people, were not considered. In each ad containing people, the ad was reviewed to determine number of blacks shown in the ad, the role portrayed by the black if one or more were present, and the product being advertised if a black were used in the ad.

The magazines reviewed were obtained in the Piedmont area of North Carolina, thus they may contain slight regional variations from issues that would be available elsewhere. No attempt was made to control for this possibility. Also, no attempt was made to control for duplicate ads either within or between publications.

### Findings

**Table 1** shows that the number of blacks depicted in advertisements portraying people increased from 4 percent in 1970, to 5.4 percent in 1975; and increased again to 7.7 percent in 1980. Using a difference of proportions test, the changes from 1970 to 1975 and from 1975 to 1980 are significant at the .01 level. That is, when a difference of proportion  $Z$  statistic was calculated on the change in percent of blacks depicted in advertisements in the 1970 to 1975 period, the calculated  $Z$  of 63.7 was greater than the critical  $Z$  value for the rejection of the null hypotheses at the .01 level of significance. The calculated  $Z$  of 84.07 for the change from period 1975 to 1980 exceeded the critical  $Z$  for the rejection of the null hypotheses at the .01 level of significance. Thus, the percentage of blacks in ads depicting people does appear to be increasing, at least in the publications chosen for this study.

With regard to the role depicted by blacks in print advertising, roles seem to be moving more in the direction of higher status portrayal of blacks. In the advertisements depicting blacks that were reviewed for the study, where role determination was possible, 11 percent of the ads portrayed blacks as either professionals or white collar employees, 33 percent portrayed them as entertainers and athletes. Only 3 percent portrayed blacks in blue collar or other lower status roles.

**Table 2** demonstrates the findings with regard to type of product being promoted in advertisements depicting blacks. Although statistical hypotheses testing would be questionable, due to low cell frequencies, some interesting changes are evident in the table. For example, there has been a remarkable increase in the use of blacks in automobile advertising, from 5.9 percent of advertisements depicting blacks in 1970, in the magazines reviewed here, to almost 10 percent in 1980. There have also been some noteworthy declines, in the advertising of audio-equipment/records/entertainment and in the area of books/magazines for example.

### Discussion

The increasing use of blacks in advertisements depicting people indicates that at least some marketers are responding to the realities of today's demographics. Still, the 1980 black percentage shown in this study, 7.7 percent, trails both the population and the income figures cited above [10]. Thus, it would appear that blacks are still underrepresented, at least in comparison to these statistics. Nevertheless, the trend toward greater use of blacks in advertisements depicting people, which was identified by Kassarian [6] and by Stutts and Pride [9], appears to be continuing.

The role of black models in the 1970 to 1980 period noted here is also improving. Again, this echoes the finding of Kassarian [6], but in contrast to his findings, the advertisements considered here do tend to portray blacks in middle-class settings. Even when role portrayed by the black model was not clear, setting of the ads tended to reflect middle-class surroundings and values. The findings reported here also fit well with those of Cox [4] who found an increasing tendency to portray blacks as entertainers, athletes and professionals.

The products associated with ads depicting blacks also are changing. Whereas in the Kassarian study it was noted that "advertisers with large advertising budgets, such as manufacturers of patent medicines, automobiles" and so forth fail to use blacks in their ads [6, p.39], the present study indicates that this no longer appears to be true. On the contrary, this study notes a remarkable increase in the usage of blacks to promote automobiles, drugs and cosmetics. Yet, this study noted no pronounced move in the direction of using blacks to promote food products - an area which would seem to be an excellent choice for depicting blacks in promotion [1].

### Conclusion

The purpose of this study was to examine the change in the use of black role models in mass circulation magazine advertising from 1970 to 1980. Specifically, the investigation considered three aspects of the black role model: the frequency of use of blacks in advertisements, the role portrayed by the blacks pictured and the advertised products which used black models. Results of the study suggest that both the number of blacks in advertisements and the status of the black models have increased in the magazines surveyed during the period of investigation. In addition, the advertised product using black models has changed. That is, in 1980 more blacks were pictured in automobile, drug and cosmetic advertisements than were pictured in earlier ads. Declines were observed in the use of blacks in audio/records/entertainment and books/magazines over this period.

The results would suggest that at least for the magazines surveyed, advertisers are becoming more aware of the black market and are directing more magazine advertising toward this segment. However, this advertising is still not proportional to the numbers of blacks in the market place nor to the purchasing power of the black segment. Advertisers may though be spending part of their advertising dollar aimed at the black market in predominantly black magazines such as Ebony rather than more mass circulation magazines. Further study is needed to consider the cross advertising in mass and black magazines. Investigations along these lines would help to develop a clearer picture of the extent to which marketers are reaching the large and growing black market segment.

TABLE 1

## TYPE OF ADVERTISEMENT BY MAGAZINE AND YEAR

<u>Year and Magazine</u>	<u>Number of Ads Depicting People</u>	<u>Number of Ads Depicting Blacks</u>	<u>Percentage of Ads Depicting Blacks</u>
<u>1970</u>			
Better Homes and Gardens	185	6	3.2
Reader's Digest	117	7	6.0
Sports Illustrated	65	3	4.6
Time	<u>59</u>	<u>1</u>	1.7
Total	426	17	
Mean:	$\frac{\text{Ads Depicting Blacks}}{\text{Ads Depicting People}} = \frac{17}{426} = 4\%$		
<u>1975</u>			
Better Homes and Gardens	149	4	2.7
Reader's Digest	98	3	3.0
Sports Illustrated	99	8	8.0
Time	<u>45</u>	<u>6</u>	13.3
Total	391	21	
Mean:	$\frac{\text{Ads Depicting Blacks}}{\text{Ads Depicting People}} = \frac{21}{391} = 5.4\%*$		
<u>1980</u>			
Better Homes and Gardens	237	7	3.0
Reader's Digest	133	16	12.0
Sports Illustrated	100	14	14.0
Time	<u>69</u>	<u>4</u>	5.8
Total	539	41	
Mean:	$\frac{\text{Ads Depicting Blacks}}{\text{Ads Depicting People}} = \frac{41}{539} = 7.7%*$		

\* Mean percent significantly different from previous period using a difference of proportion test and  $p = .01$

TABLE 2

PRODUCTS USING BLACKS IN ADVERTISING  
BY YEAR BY PERCENT

<u>PRODUCT</u>	<u>1970</u>	<u>1975</u>	<u>1980</u>	<u>TOTAL</u>
Armed Forces	0%	9.5%	4.9%	5.1%
Audio Equipment/Records/Entertainment	23.5	9.5	7.3	11.4
Automobile	5.9	14.2	24.4	17.7
Banks/Insurance	0	9.5	9.8	7.6
Books/Magazines	17.7	23.8	4.9	12.7
Drugs/Cosmetics/Tobacco Products	0	4.8	9.8	6.3
Food/Beverage/Cleaning	17.7	0	7.3	7.6
Home Materials/Equipment	11.8	9.5	4.9	7.6
Industrial Supplies/Equipment	11.8	0	7.3	6.3
Sports Equipment/Toys	0	4.8	7.3	5.1
Travel/Airlines/Tourism	11.8	9.5	4.9	7.6
Miscellaneous	<u>0</u>	<u>4.8</u>	<u>7.3</u>	<u>5.1</u>
TOTALS	100.2%*	99.9%*	100.1%*	100.1%*
Sample Size	17	21	41	79

\*Totals to other than 100 percent due to rounding.

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AN EXPERIMENTAL INVESTIGATION OF SEX  
DIFFERENCES IN RECALL OF VERBAL  
VERSUS VISUAL ADVERTISING STIMULI:  
A CONTENT ANALYSIS APPROACH

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#### Abstract

A study was designed to explore the effects of sex, ad components, and their interaction on the recall of information from printed ads. Total recall did not vary by sex, but recall of ad components showed significant differences as did the interaction of sex and components. Implications for advertisers and suggestions for future research are given.

These findings suggest that the pictorial component of an ad will produce recall scores higher than the recall scores for the copy component. Females may sustain attention longer than males so that female recall scores should exceed those of males; female attention, however, should focus more on the illustration while males more than females will devote attention to the copy.

#### Study Objectives

#### Introduction

Marketers, in the past several years, have paid increasing attention to consumer information processing (CIP)--particularly marketer-dominated information. Several CIP models exist which differ in terms of number and precise character of stages involved. However, they have overall similarity in progressing from exposure through retention and recall.

This study focused on two objectives--to determine whether the illustration copy cues from printed advertisements differed in terms of respondents' ability to recall information from each of them and to see if the recall of illustration versus copy cues varied by the sex of the respondent.

Included in most models is an "interpretation" stage wherein the consumer assigns meaning to the incoming stimuli. What meaning is assigned to stimuli is difficult to determine because interpretation is a function of both stimuli and individual characteristics (Myers and Reynolds, 1968). When the stimulus is complex such as an ad containing illustration and copy, the determination of meaning is even more difficult. Gestalt psychology would suggest that pictures and words are perceived together as a "whole." In fact, the FTC is now beginning to consider the total ad (rather than copy only) in deciding whether ads are misleading (Advertising Age, 1979; Crock, 1979).

The primary area of implications from the study will lie with the creative strategy aspect of advertising management. Should illustration recall prove superior to copy recall, this would provide suggestions for both content of information and the relative emphasis to be placed on copy versus illustrations. If sex is a moderating variable, then this would provide additional insights for advertisers whose intended audience is segmented by sex.

#### Methodology

Nonetheless, there is a substantial amount of research that suggests that people react differently to verbal versus visual material. Hanes (1973), Snowman (1973), and Seymour (1973) all report findings that demonstrate the superiority of pictures over words in terms of recognition and task responses. Haller (1972) and Beik (1962) found that the picture was superior to the words in producing recall of TV commercials. These findings suggest that the illustrations in ads are more important than copy in generating unaided recall of information.

#### Hypotheses

In order to accomplish the research objectives, the following hypotheses were developed for testing:

- H<sub>1</sub>: People recall equal amounts of information from pictorial versus verbal cues contained in a printed ad.
- H<sub>2</sub>: Males and females do not differ in their recall of pictorial versus copy-related information from printed ads.

However, pictorial recall superiority may be moderated by sex. There is some evidence suggesting that females deduce more meaning than men from pictures (Family Weekly, 1976) and are faster in translating pictures into words (Posnansky and Rayner, 1977). Males' strength tends to lie with verbal material (Kail and Siegal, 1977) or numeric reasoning (Dwyer, 1973) resulting in a more conceptual approach to stimuli (Biery, Bradburn and Galinsky, 1958). Girls tend to gaze longer (Kleinke, Desautels and Knapp, 1977) and fixate longer than males (Harrison and Soderstrom, 1977).

#### Advertisements

Six ads were selected that represented three product categories (cigarettes, automobiles, liquor) with one brand per category. Each brand had two advertisements: one that was mostly illustration in nature and the second which was copy dominated. All six advertisements were full page, four-color ads selected from current magazines. Prior to showing the ads to the subjects, slides of the ads were made to assure uniform exposure and viewing conditions.

#### Subjects

To collect the data for the study, 48 students (24 males and 24 females) were recruited. One half of the students (12 males and 12 females) viewed the three



ads (one ad per product category) that were predominately illustration oriented. The remaining subjects viewed the three copy-dominated ads. In each case the subjects were sent in small groups to a separate room and were instructed to arrange themselves around a screen so that they could comfortably view some slides. Each of the three ads was shown for thirty seconds. After ad exposure, each group was escorted to a different room to complete a questionnaire. Subjects were not informed of the intent of the study.

#### Dependent Variable

The total number of verbal (visual) stimuli recalled in a given ad served as the dependent variable of this study. To operationalize the variable, subjects were asked to describe completely the three ads they had just seen. These written descriptions were then subjected to a content analysis following a procedure recommended by Budd, Thorp and Donohew (1967). According to their procedure, the contents of a description are compared to a master checklist and a value of 1 is awarded for each item that appears in the description as well as on the master checklist. Anything contained in the written description that does not appear in the master checklist is not counted.

Simple addition of the values yields a score for each respondent's description. Because each ad differed in terms of the number of possible items that could be mentioned, it was necessary to transform scores to a common denominator before statistical analyses could be done.

Three researchers independently evaluated each of the ads and created an independent master checklist. This, in essence, is a test-retest form of reliability evaluation (Budd, Thorp and Donohew, 1967). A simple formula used to determine the reliability of two coders (North, Holsti and Zanimovich, 1963) was modified to three coders as follows:

$$R = \frac{3(C_1, 2, 3)}{C_1 + C_2 + C_3} \quad (1)$$

where  $C_1, 2, 3$  = number of agreements of three coders  
 $C_i$  = number of category assignments by coder  $i$ .

In the present case the illustration and copy cues of each of the six advertisements were evaluated separately so that twelve master checklists were created. Applying the reliability formula to each of the twelve checklists yielded coefficients of .92 and above, indicating the checklists are reliable. Simple counting of the number of items mentioned in the written descriptions was straight forward and did not require multiple coders or, therefore, reliability assessments (North, Holsti and Zanimovich, 1963).

#### Method of Analysis

The ANOVA procedure was applied to the mean recall scores of pictorial and verbal cues for each of the six ads. In those instances where the F-test indicated that a treatment effect was present, Tukey's HSD a posteriori test was conducted to determine the source(s) of the significant differences (Kirk, 1968). Visualizations of the interactions between sex and ad cues are provided in those instances where the interactions were significant.

## Results

Results of the ANOVA procedure conducted for each of the six ads are shown in Table 1. In five cases (the one exception being the copy-dominated ad for the

EXHIBIT 1  
MEAN RECALL SCORES

Ads	Females		Males	
	Visual Cues	Verbal Cues	Visual Cues	Verbal Cues
<u>Copy-Dominated</u>				
1. Automobile	17.3	1.5	10.8	3.7
2. Cigarette	15.8	3.8	8.3	5.0
3. Liquor	17.4	2.8	5.5	4.8
<u>Illustration-Dominated</u>				
1. Automobile	2.3	0.7	1.4	2.1
2. Cigarette	15.3	4.5	12.7	7.5
3. Liquor	16.3	3.4	12.8	8.0

liquor brand) the recall of items does not significantly differ by respondent's sex. Males and females do not appear to differ much in terms of the total number of items recalled from ads, regardless of illustration- versus copy-domination of the ad. This holds true across the product categories included.

The F values associated with the ad cue breakdown are significant at  $\alpha < .001$  for five of the six ads. A similar mean number of items were recalled from both the illustration and copy parts of the illustration-dominated automobile ad; in fact, there was very little recalled about this particular ad. (See Exhibit 1). For the other five ads, however, the mean number of items from the copy versus illustration were significantly different. In all five cases, the mean number

TABLE 1  
ANOVA RESULTS

Ads	Variable	Sum of Squares	df	Mean Square	F	$\alpha$
<u>Copy-Dominated</u>						
1. Automobile	Sex	60.75	1	60.75	1.90	.20
	Ad Cue	1611.84	1	1611.84	51.36	<.001
	Sex x Ad Cue	236.88	1	236.88	7.39	.01
	Error	1408.25	44	32.01		
2. Cigarette	Sex	116.64	1	116.64	2.72	.11
	Ad Cue	712.00	1	712.00	15.63	<.001
	Sex x Ad Cue	229.68	1	229.68	5.37	.026
	Error	1883.58	44	42.81		
3. Liquor	Sex	294.62	1	294.62	15.73	<.001
	Ad Cue	711.48	1	711.48	37.99	<.001
	Sex x Ad Cue	580.94	1	580.94	31.02	<.001
	Error	824.44	44	824.44		
<u>Illustration-Dominated</u>						
1. Automobile	Sex	1.03	1	1.03	.62	.45
	Ad Cue	2.51	1	2.51	.51	.24
	Sex x Ad Cue	14.94	1	14.94	9.01	<.005
	Error	73.00	44	1.66		
2. Cigarette	Sex	.31	1	.31	.01	.98
	Ad Cue	768.00	1	768.00	20.49	<.001
	Sex x Ad Cue	96.44	1	96.44	2.57	.13
	Error	1649.25	44	37.48		
3. Liquor	Sex	8.78	1	8.78	.26	.64
	Ad Cue	945.19	1	945.19	28.16	<.001
	Sex x Ad Cue	209.97	1	209.97	11.26	.02
	Error	1476.84	44	33.56		

of recalled items from the illustration cues exceeded the mean recall values from the copy component. In light of this evidence, then,  $H_1$  may be rejected. In most cases, the visual component produces a significantly higher level of recall than does the verbal part of an ad. This held true even for the copy-dominated ads and across product categories.

Five of the six F values for the interaction of sex and ad cues are significant. In this case, the illustration-dominated cigarette ad did not produce significant results. The five significant cases suggest that males and females differ in terms of their recall of verbal versus visual cues of an ad. This evidence means that  $H_1$  may be rejected. Again, this interaction significance holds for both illustration- and copy-dominated ads and across product categories.

Tukey's HSD test was performed on the data and led to significant treatment interactions. These test results are shown in Table 2. One interesting observation is

TABLE 2  
PAIRWISE COMPARISONS : RECALL SCORES<sup>a,b</sup>

Ads	Female	Male	Illustration	Copy
	Illustration Versus Copy Cues	Illustration Versus Copy Cues	Female Versus Male	Female Versus Male
<u>Copy-Dominated</u>				
1. Automobile	15.8 <sup>c</sup>	7.1 <sup>c</sup>	6.5 <sup>c</sup>	-2.2
2. Cigarette	12.0 <sup>c</sup>	3.3	7.5	-1.2
3. Liquor	14.6 <sup>c</sup>	0.7	11.9 <sup>c</sup>	-2.0
<u>Illustration-Dominated</u>				
1. Automobile	1.6 <sup>c</sup>	-0.7	-0.9	-1.4
2. Cigarette	12.9 <sup>c</sup>	4.8	3.5	-4.6
3. Liquor	---- <sup>d</sup>	---- <sup>d</sup>	---- <sup>d</sup>	---- <sup>d</sup>

<sup>a</sup> Comparisons are made by using Tukey's HSD test

<sup>b</sup> Values are differences between means reported in Exhibit 1

<sup>c</sup>  $p < .05$

<sup>d</sup> Tukey HSD test not performed

that in all five cases the mean recall values of illustration versus copy cues are significant for females. For males, however, only one significant difference was found (for copy-oriented automobile ad). These differences are visually presented in Figure 1. It can be seen that the mean number of items recalled by females from the visual cues exceeds the mean number of copy items in all cases. The same is generally true for males, but the differences are far less pronounced (and thus were not significant). Males actually recalled more from the copy than from the illustration in the automobile illustration ad.

Figure 1 also shows that males have a higher mean recall of copy items than females, but the data in Table 2 indicate these differences are not sufficient to be significant at  $\alpha \leq .05$ . Similarly, Figure 1 indicates that females consistently recalled a greater number of items than males from the illustrations, but Table 2 data indicate that the differences are significant at  $\alpha \leq .05$  in only two cases: the automobile and liquor copy-dominated ads.

#### Discussion

The purpose of this study was to explore whether the amount of information recalled from the illustration

or the copy of ads exhibited higher recall. An additional purpose was to see if recall varied by the interaction of ad cues and respondent's sex. Although sex was not generally related to total recall, this conclusion must be modified when significant interactions are found (Kirk, 1968). It was found that the recall of ad cues differed, and the interaction findings showed that males and females respond differently to illustration and copy.

Expectations from the literature search were that women would more likely recall a greater amount of illustration-related information than men; whereas men would likely recall more copy-related material. The findings here conform to those expectations. Moreover, the findings also are in accordance with the literature in that the recall of illustration-derived information is greater than the recall of copy-related material for both men and women.

This implies that advertisers must pay particular attention to the illustrations used in ads. Not only are illustrations strong attention generators for the ad, but they also convey information that is more readily recalled than verbal information. Thus, the illustration should be designed to relay information the advertiser wishes to convey and should not simply contain decorative models.

Another implication is that the illustrations can induce readers to react (and thus retain) copy, whereas lengthy copy in the ad may discourage readership. Figure 1 clearly showed that the mean number of recalled copy items is low for all three copy-dominated ads but is higher for the cigarette and liquor illustration-oriented ads. The automobile illustration ad appears to have induced men to read the ad in that they recalled more from the copy than from the illustration.

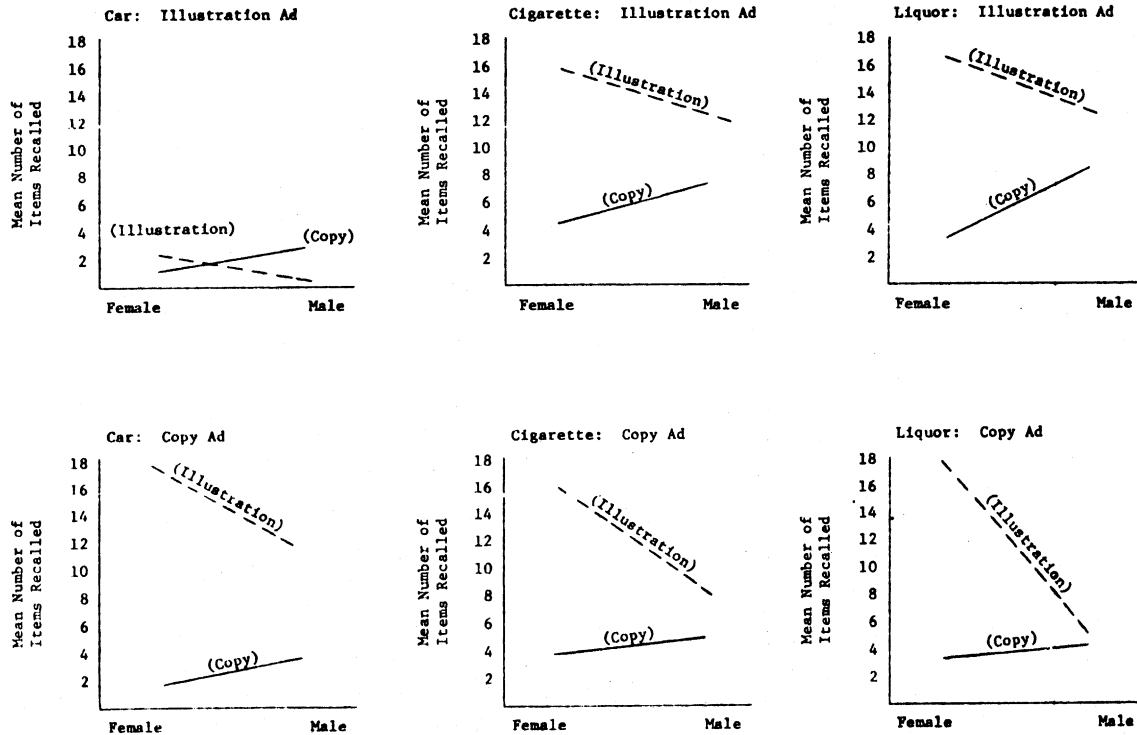
In general, then, much of the space should be devoted to illustrations carrying information the advertiser wishes to convey. For ads aimed specifically at women, this would hold especially true--copy should be minimized. Those ads aimed at male audiences may contain more copy.

#### Conclusion

Several avenues are open for further research. Since a limited number of products were included, an extension of the study would be to incorporate additional product groups to determine the extent to which these findings may be generalized. Another departure would be to hold a product category constant and include ads from several different brands within that category; this procedure would allow interbrand comparisons.

Additional research could focus on measures other than recall. Such variables could include item comprehension, preferences, interest, etc., or changes in those variables produced by ads.

FIGURE 1  
INTERACTION EFFECTS



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## A STANDARDIZED MEASURE OF SEX ROLE PRESCRIPTIONS

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### Abstract

An instrument to measure sex role specificity (SRS) was composed and standardized on 1,200 adults from the general West Coast population. The SRS scales proved to be reliable and internally consistent, and two dominant factors underlie prescriptions for each sex. Role specificity differed systematically by demographic status.

### Introduction

#### Sex Roles and Marketing

The use of sex as a segmentation variable has spawned a great deal of marketing research designed to determine the appropriate roles to be assigned to women through advertising appeals, to measure women's perceptions of the ways they are now being portrayed, and to gauge the changing sex roles this segment may be adopting. The psychology literature on sex roles is so extensive it might warrant a journal devoted entirely to research on this topic. A review of the literature in both psychology and marketing indicates a lack of consistency in both the methods used to determine perceptions or effects of sex role portrayals and in the results and conclusions of the research.

For the most part, research on sex roles in the marketing literature has focused on the portrayal of women in commercial advertising. The most common method has been to do post hoc content analysis of advertisements to determine how women have been portrayed, and then to offer criticism of the limited range of roles presented. Studies by Courtney and Lockeretz (1971), Wagner and Banos (1973), Sexton and Haberman (1974), Venkatesan and Losco (1975) and Belkaoui and Belkaoui (1976) all followed this basic paradigm. The consensus of these researchers was that women were portrayed as (a) homemakers, (b) sex objects, (c) dependent on men, (d) holding jobs of little importance, and (e) with little or no decision making responsibility.

In respect to the determination of people's attitudes toward the roles depicted, research by Wortzel and Frisbie (1974), Green and Cunningham (1975) and by Lundstrum and Sciglimpaglia (1977) focused on the effects of role portrayal on product evaluations or purchase decisions. None of the studies reported to date has attempted to determine the normative roles that people feel the sexes should enact. Lacking information on these prescribed roles for men and women, the advertiser and marketer must rely on his or her own observation and judgment or on the "conventional wisdom" of the industry as a whole. The purpose of this research is to develop a standardized instrument for the measurement of both male and female sex role prescriptions. The results should provide indications of how the public feels men and women ought to be portrayed; i.e., what roles are acceptable and unacceptable for men and for women. No such standardized instrument has been developed, as yet, within the discipline of psychology. Thus, the instrument developed here might have relevance well beyond the portrayals of women in advertising.

### Role Prescriptions

Socially defined roles might be classified into three different types: (1) prescribed roles, (2) perceived roles, and (3) enacted roles. The prescribed roles are those that are actually expected of the actor; the behavior that others in the social environment feel befits a particular individual by virtue of that person's sex, age, occupation, or some other characteristic. Perceived roles are from the view of the individual. They are what the person believes is expected or regarded as appropriate by others. Within a social situation, these two types of roles might be discrepant from one another, either because the prescriptions are ambiguous or because the actor is relatively insensitive, or both. The enacted role is the behavior pattern that is actually acted out by the individual. It, too, might differ from the prescribed and the perceived. In social circumstances, the actor may be unable to play the role, even though it is correctly perceived, or the person may not care to conform to the role prescription, out of choice.

An instrument might be developed to measure any or all of these types of roles. Enacted roles could be measured by the systematic observation of each sex in various social situations. Perceived roles could be ascertained by asking people what they believe others expect of them, based on their sex. Prescribed roles can be measured by asking the individual what their generalized expectations and norms for others are; what things in the behavior of men and women in general would gain their approval or disapproval. It is this latter tack, the measurement of prescribed roles, that this project pursues.

### Methodology

#### Item Selection

The selection of an item pool began with an examination of the ways that "manhood" and "womanhood" have been described in both the academic literature and the popular press. Topics tended to fall into two basic categories: (1) What people are by virtue of their particular sex, and (2) what they should be, given their sex. For example, one might believe that women are innately more capable of caring for small children than are men. Similarly, one might believe that men ought to be the major decision-maker in the family. An item pool of several hundred such statements were gleaned from the literature. Those which were redundant with others on the list were culled, as were those that referred to unusual actions or extraordinary situations. This process provided a list of less than two hundred potential item topics. Of those remaining on the list, forty-eight items applying to masculine behavior and an equal number of items applying to feminine behavior were eventually selected by the researchers. The criteria for selection were: (1) The degree to which the action or condition might be seen as discriminating between the sexes. (2) The judgment of the degree of common acceptance that might be expected, based on the literature. (3) The representation of a wide variety of behavior domains or categories.

## Behavior Domains

Within the item pool, the topics could be congregated into six general behavior domains: (1) Recreation and leisure behavior, (2) food, beverage consumption and smoking, (3) parenting and family behavior, (4) social appearance and etiquette, (5) employment and occupational factors, and (6) dating, mating and sexual behavior. These domains were regarded as relatively comprehensive and inclusive of typical actions and roles important to the daily life of individuals in all walks of adult life. The items were written in a relatively simple vocabulary and were expressed in conversational or vernacular grammar. The list was shown to several lay people of various backgrounds to obtain their comments concerning their comprehension and general reaction. A few were rewritten, but none replaced.

## Scaling and Formatting

The items were expressed as statements to which respondents could indicate their agreement or disagreement. The scale used for the instrument was a five-point Likert scale: (1) Strongly agree, (2) Agree, (3) Neutral, (4) Disagree, and (5) Strongly disagree. The scale appeared at the top of each page, with twenty-four items listed below it. Respondents recorded the number of the scale category corresponding to their opinion in a space to the right of the item.

Half of the items applied to women's behavior and half to men's behavior. Half of those in each category were worded so that agreement would indicate sex role specificity or constraint and the others were inclined in the opposite direction to control for "yea-saying" and "nay-saying." The items were listed in quadruplets in the sequences: (1) masculine positive, (2) feminine positive, (3) masculine negative, and (4) feminine negative. The groups were randomly ordered on the four-page instrument.

## Sampling and Data Collection

The data for the standardization of the sex role scale were collected in two field projects sampling the general adult population from two major metropolitan areas of Southern California during the spring of 1980. The same sampling method and quotas and the same data collection techniques and validation methods were used for each project.

The field workers who collected the data were undergraduate students of marketing or marketing research classes. Each received several hours of instruction on the project and data collection techniques. They were instructed to contact potential respondents in their homes, to explain the nature of the project and permit the respondent to read the letter of transmittal, and after winning their cooperation, to leave the questionnaire with the respondent to be self-administered at their own convenience. The field worker made an appointment to return a few days later to retrieve the completed questionnaire. "Nonresponse" with this procedure might be considered either a refusal to accept the questionnaire or failure to complete it properly. The two sources, combined, were less than five percent of the responding sample.

Each field worker was given a quota based on the sex, age and occupational status of the respondents. This procedure was used to insure an adequate representation of the various demographic segments of the society. Field workers received credit for their work according to how closely they were able to fulfill the quota.

The name, address and the telephone number of each respondent were obtained on the questionnaire. The data were submitted to a special computer program to provide a two-page report to the respondent. This report expressed sex role specificity only in terms of preference for so-called "gendered" products or services, so that no conceivable threat would be conveyed to respondents. Their opinions were shown in relationship to those of the others in the sample, and this permitted them to make comparisons of their degree of preference for "typically masculine or feminine" brands or products on the market. The reports served as a small inducement to potential respondents, and this form of feedback was very well received by the respondents. Because every respondent was mailed a report at his or her home address, this constituted virtually one hundred percent verification of actual response. The only nondeliverable reports proved to be clerical errors or relocation by the respondent during the interim between receipt and mailing.

## Data Processing

The data were keyed to computer file and submitted to a series of programs to machine edit the data. Anomalies were sight edited from the source documents, and corrections made as necessary. About twenty cases were eliminated from the file because they were not sufficiently complete to be included. Six hundred cases were obtained in each of the data collection projects.

The data were submitted to statistical analysis to first obtain descriptive statistics. Given the insignificant departures of the major score distributions from normal, the data were judged adequate for parametric statistical techniques. Item analysis and analysis of score distributions were obtained principally with the use of product-moment correlations and multiple regressions. Internal consistency analysis included the computation of coefficients alpha and other relevant measures of internal consistency reliability. Lastly, the relationships among scores and demographic categories were measured with the use of factorial analyses of variance.

## Test-Retest Reliability

To obtain a measure of the "trait stability" and the reliability of the instrument over time, the scales were administered to sixty-five undergraduate business students on two occasions with a one-month interim period between the administrations. The sequence of the items was changed for the second administration, to reduce the effect of actual item response recall. While these respondents were not from the general public, there is little reason to believe that these results would differ systematically from what might be obtained from the public at large.

## Results

### Degree of Specificity

The percentage of the sample that were either neutral or answered in a direction indicating sex role specificity (agreement with "positive" items or disagreement with "negative" ones) for each item were computed and examined. The majority of items yielded distributions of less than fifty percent in the six behavior categories, but several items did receive majority support for specificity in each category.

Comparison of the proportions for male and female respondents suggested that men tended to be more sex



role specific than women. This observation was supported by subsequent analysis of variance. While there are a few "turn-arounds" such that one sex was more "liberal" for an item of that gender than the opposite sex was, these were only a small minority. In general, both sexes appeared to be about as specific for their own sex as for the other. Nor did one behavior domain appear to be more subject to sex role constraint than the others. Each domain contained several items that received very low and very high sex role adherence.

#### Scale Reliability

Table 1 contains a complete description of the masculine, feminine and combined scale distributions. Before this analysis was performed, the "negative" items were reflected so that all items and scale

scores ascend toward sex role specificity. A constant of one was subtracted from each item value, so that with forty-eight items on each sub-scale, the minimum obtainable score was zero and the maximums were 192 for the sub-scales and 284 for the combined scale. The scores, then, tended to be rather "low" on sex role specificity on this absolute basis. The average item mean over, the 1,200 respondents, proved to be well below the "midpoint."

Item analyses were conducted for each sub-scale and for the combined scale. The mean, minimum and maximum inter-item correlations are shown in Table 1. None of the individual items in any of the three analyses proved to have either a negative correlation with the total of the remaining items in the analysis or to have an exceptionally low multiple regression coefficient when regressed on the other items. In other words, there were no negative discriminators and item redundancy was well within acceptable limits. All coefficients alpha were over .9, indicating scales that are very internally consistent. The test-retest reliability coefficients were all over .85, indicating that there is fairly high trait stability and little error variance associated with the scales. The other coefficients of consistency were similarly high for the standardization sample.

The masculine and feminine sub-scales were compared using the "split-half" analysis technique for equal length scales. While they were highly associated with one another on all comparison coefficients, their mean values were significantly different, as indicated by the F-ratio and probability listed in Table 1. This indicates nothing more than the fact that the feminine sub-scale tends to elicit more sex role specific responses than does the masculine scale. Actually, there is no way, within this design, to determine if that relationship is a function of the greater application of sex role specification to women than to men, or merely a function of the arbitrary choice and wording of items.

#### Demographic Categories

The distribution of the responding sample across nine demographic dimensions are shown in Table 2. Each sub-scale and combined scale mean for the various categories are also shown. Factorial analysis of variance revealed that all demographic categories except income provided significant main effects with a probability of less than .001. Neither sub-scales nor combined scale differed significantly by income category, and the masculine sub-scale did not provide a significant main effect by marital status. Aside from those exceptions, sex role prescriptions differ markedly according to demographic status. Most notably:

- A. The young tend to be less prescriptive.
- B. Men are more prescriptive than women.
- C. Married people are more prescriptive for women.
- D. Prescription is greater for non-working, late family life cycle.
- C. The more the education, the less the prescription.
- E. Retired, homemakers and self-employed are more prescriptive.
- F. Semi-skilled labor are high and professionals low on prescription.
- G. Orientals and Native Americans are high on prescription.

To measure the interaction of demographic factors on sub-scale and scale scores, the two-way interactions were analyzed while the higher-order interactions were thrust into the error term in a factorial analysis.

TABLE 1

SCALE AND SUB-SCALE SCORE DISTRIBUTIONS AND RELIABILITY COEFFICIENTS

Statistic	Masc.	Fem.	Comb.
Standardization Sample			
Mean.....	57.62	60.93	118.55
Standard Deviation.....	20.35	22.93	41.68
Standard Error.....	0.59	0.66	1.20
Skewness.....	-0.16	0.11	-0.10
Kurtosis.....	0.22	0.52	0.30
Maximum.....	127.	178.	284.
Maximum Obtainable.....	192.	192.	384.
Minimum.....	0.	0.	0.
Minimum Obtainable.....	0.	0.	0.
Sample Size.....	1200.	1200.	1200.
Number of Items.....	48.	48.	96.
Mean Item Mean.....	1.20	1.27	1.24
Minimum Item Mean.....	0.55	0.56	0.55
Maximum Item Mean.....	2.91	2.34	2.91
Mean Inter-Item Corr....	1.20	1.27	1.24
Minimum Inter-Item Corr..	-0.11	-0.05	-0.11
Maximum Inter-Item Corr..	0.44	0.50	0.60
Coefficient Alpha.....	0.91	0.93	0.96
Std. Item Coef. Alpha....	0.92	0.93	0.96
Corr. Betw. Sub-Scales...			0.86
Spearman-Brown Coef.....			0.93
Split-Half Betw. Sub-Sca.			0.91
F-Ratio Betw. Measures...			353.29
Probability.....			0.00
Test-Retest Sample			
Mean, 1st Admin.....	52.06	55.72	107.79
Mean, 2nd Admin.....	51.75	53.91	105.66
S.D., 1st Admin.....	22.59	22.92	44.76
S.D., 2nd Admin.....	22.86	23.91	45.63
Coef. Alpha 1st Admin....	0.94	0.94	0.97
Coef. Alpha 2nd Admin....	0.95	0.95	0.97
Sample Size.....	65.	65.	65.
Test-Retest Reliability..	0.87	0.86	0.88
Spearman-Brown Coefficient.	0.93	0.93	0.94
Split-Half Betw. Admin....	0.93	0.93	0.94



TABLE 2

## SCALE SCORE MEANS BY DEMOGRAPHIC DISTRIBUTIONS

Category	Freq.	Pct.	Masc.	Fem.	Comb.
Total Sample					
All	1200	100.0	57.6	60.9	118.6
Respondent Age					
Teens	43	3.6	59.9	58.0	117.9
Twenties	385	32.1	54.4	54.1	108.6
Thirties	248	20.7	53.3	59.2	109.5
Forties	162	13.5	60.6	60.8	117.8
Fifties	165	13.7	59.1	66.3	125.4
Sixties	135	11.2	65.9	74.2	140.1
Seventies & Over	65	5.1	74.7	81.3	154.0
Respondent Sex					
Male	566	47.2	63.1	64.8	129.9
Female	634	52.8	52.8	57.5	110.2
Respondent Marital Status*					
Married	673	65.1	58.6	63.6	122.2
Not married	527	43.9	56.3	57.5	113.9
Family Life Cycle					
Young Single	349	29.1	53.4	54.3	109.7
Young Couple	159	13.2	50.7	52.7	103.4
Full Nest I	123	10.2	57.3	61.2	118.5
Full Nest II	124	10.3	55.3	59.2	114.5
Full Nest III	141	11.7	65.9	67.2	129.1
Empty Nest I	94	7.8	60.8	67.2	128.1
Empty Nest II	110	9.2	65.8	74.9	140.7
Sole Elder I	37	3.1	52.0	57.2	109.1
Sole Elder II	63	5.3	67.4	75.8	143.2
Respondent Education					
Elementary	29	2.4	80.4	87.6	168.0
Some High School	80	6.7	69.6	72.9	142.5
High School Graduate	404	33.7	60.3	65.2	125.5
Some College	326	27.2	56.0	59.2	115.2
College Graduate	211	17.6	55.2	56.0	111.2
Post-Graduate	150	12.5	46.5	48.5	95.0
Respondent Employment					
Company Employed	554	46.2	56.4	57.9	114.3
Self Employed	103	8.6	59.2	62.8	122.0
Government Emp.	194	16.2	51.3	53.2	104.6
Homemaker	118	9.8	57.8	68.3	126.1
Seeking Emp.	37	3.1	60.7	59.7	120.4
Retired	143	11.9	69.4	77.1	146.5
Student	51	4.3	55.7	58.0	113.7

TABLE 2 (cont.)

## SCALE SCORE MEANS BY DEMOGRAPHIC DISTRIBUTIONS

Category	Freq.	Pct.	Masc.	Fem.	Comb.
Respondent Occupation					
Semi-Skilled	136	11.3	65.5	67.5	130.0
Craft or Trade	164	13.7	63.2	66.3	129.5
Clerical Work	241	17.8	56.4	61.6	118.0
Technical & Sales	222	18.5	68.6	60.7	119.3
Managerial	207	17.2	57.9	59.8	117.6
Professions	225	18.8	49.8	52.6	102.4
None Listed	32	2.7			
Respondent Ethnicity					
No Minority	1033	88.1	59.6	60.0	116.6
Black	40	3.3	58.6	62.6	121.2
Oriental	22	1.8	78.0	76.4	154.3
Chicano	20	1.7	59.7	59.8	119.5
Native American	10	0.8	76.7	74.1	144.8
Other Ethnicity	75	6.3	63.0	66.8	129.8
Respondent Family Income**					
Under \$5,000	37	3.1	54.5	61.0	115.6
\$5,000 to \$9,000	110	9.2	60.3	61.3	121.6
\$10,000 to \$14,000	164	13.7	56.8	58.6	115.4
\$15,000 to \$19,000	132	11.0	55.0	58.5	113.5
\$20,000 to \$24,000	62	5.2	56.3	58.4	118.7
\$25,000 to \$29,000	74	6.2	52.2	54.9	107.2
\$30,000 to \$34,000	27	2.3	50.4	53.3	103.7
\$35,000 to \$39,000	36	3.0	53.6	57.0	110.6
\$40,000 and Over	61	5.1	60.0	63.5	123.6

\*No significant difference in Masculine subscale.

\*\*No significant differences in any scale means.

sis of variance. The only significant interactions with factors that also provided significant main effects were between family life cycle and education and between family life cycle and occupation. In the main, it appears that the other demographic factors act independently and additively. That is, an individual is likely to be more sex role specific if his or her education level is low and even more so if the person is an elderly male, etc. Of course, this does not apply equally to the composite family life cycle variable.

## Factor Composition

Each of the sub-scales were submitted to factor analyses for examination of their principle components and revelation of their rotated factor structure. (See Settle, Alreck and Belch, 1981.) Five, four, three and two factors were submitted to varimax rotation and the factor loadings and individual item content analyzed. The rotation of two factors for each sub-scale proved to be the most interpretable and meaningful. The inspection of individual item content for those items loading most heavily on each factor yielded rather different interpretations for the masculine and feminine sub-scale. In general all factors cut across behavior domains. That is, the

items on any given factor were not predominantly from one domain, and any one domain was apt to have items on two (or more) factors. The first factor on the masculine sub-scale could best be characterized as a "potency-responsibility" factor. The items loading most heavily on this factor had to do with being the breadwinner, "wearing the pants" in the family and being strong enough to make the major decisions. The other factor for the masculine sub-scale largely reflected freedom or restraint on male emotionality. Items loading heavily on this factor related to sentimentality, interest in children, succorance, fidelity and involvement in more "tender" pursuits and interests.

The two factors for the feminine sub-scale were also fairly distinct. The first might be termed "opportunity" because items loading on this factor dealt with women's rights to pursue active sports, get equal pay for equal work, hold supervisory positions and choose careers in business or industry. By contrast, the second factor contained the items that might be classified as "feminine etiquette and demeanor." These items related to "acting like a lady," accepting responsibility for household chores, putting family "first," and never acting "butchy." While the two factors were fairly distinct and interpretable for both sub-scale, it should be noted (and might be expected from the high internal consistency) that the factors are certainly not independent of one another. From subjective judgment, one might conclude that the scale measures a single underlying propensity, manifest in a variety of behavior domains, but reflecting slightly different fundamental criteria for each sex.

## Conclusions

### Scale Performance

A major objective of this project was to create and to standardize an instrument that might be used for the measurement of sex role prescriptions. The item analysis, internal consistency analysis and test-retest reliability analysis all indicate that the instrument is well balanced and very effective, relative to the statistical performance that has been obtained by psychometric instruments of this ilk. One aspect remains untested here. The external validity of the instrument remains to be tested and reported. It might be suggested, for example, that "socially desirable" response patterns tend to portray respondents as being less sex role prescriptive than they actually are. This aspect of the measurement instrument can and will be tested by comparison of its resultant scores with external indicators of sex role specificity and role related behavior. Given that refinement, the sex role scales may contribute substantially to the measurement and understanding of sex role prescriptions. Such assessment might have considerable application in the behavioral sciences in general, and for marketing, consumer behavior and promotion in particular. Sex role prescriptions could be of special interest in the marketing of "gendered" brands and products, in the understanding and clarification of the degree of normative social influence on the consumer decision process and on the selection of role models for promotion.

### Demographic Patterns

This project reveals very clearly that there are marked differences in the prescription of sex roles according to the sex, age, education and occupation of the respondent, among other demographic categories. It appears that men are more sex role prescrip-

tive than are women, that the vigor of sex role dependence increases with the age of the individual, and that those in upper education levels and higher occupational status tend to be less prescriptive on the basis of sex. These relationships have several marketing and promotional implications. For example, the relative influence of husband and wife within the family decision making process might vary systematically by demographic status. It appears likely that elderly males who have less education and lower status occupations would be most insistent on the traditional sex role specification and adherence. On the other hand, target markets composed primarily of well educated young women with high status occupations could be expected to exhibit little dependence on sex roles in the selection of products and the pursuit of life styles.

The differences in sex role specificity by age of the respondents is particularly interesting. Such differences may result from two different causes that might be called "history" and "maturation." On the one hand, it may be that social change and external demands for less dependence on distinctions by sex have caused the "younger generations" to be less sex role prescriptive. Thus, the differences could be attributable to "history" and little change in the tendency to prescribe sex roles would be expected as these generations mature and take up residence in the elderly age categories of the society. The alternative view is that the tendency to prescribe sex roles is a function of human life experience and "maturation." In that case, the youth of any epoch would be less likely to prescribe distinct sex roles than would their seniors. These confounding factors cannot be separated within this research design, confined to a static picture of the present condition. The size and nature of the standardization sample do provide a source of "baseline" data for subsequent measurement and comparison in a longitudinal format. Consequently, replication of the survey over a substantial time period will eventually reveal the relative effect of each of these two conceivable underlying causes for differences in sex roles by age and for the formation of sex role specificity in general.

### Representation

Given the differences in sex role specificity by demographic category, it seems likely that other demographic factors would also influence this prescription of roles. This project was confined to metropolitan residents of Southern California. The conventional wisdom concerning social and cultural differences among different areas of the country suggest that this geographic area might be more "liberal" in the acceptance of innovative perspectives and more willing to relinquish traditional cultural norms, values and attitudes. To the degree that these casual observations are true, one might expect rural residents of the mid-west and south to be more sex role specific. Testing of such hypotheses must await the use of the sex role scales in various parts of the country with both general and special populations.

### Promotional Models

The majority of consumer products are advertised and depicted in promotional materials within a social setting. These settings and the models portrayed by men and women in relationship to the product or service have been the subject of considerable research, as noted earlier. The results of that research indicated that the role models portrayed are confined rather rigidly to the most traditional constraints and sex role specifications, particularly for women.

## References

Probably such restriction on the range of role portrayal can be attributed in large measure to the tendency to "play it safe" with the often huge expenditures of resources on promotion. Other sources of influence and constraint can also be identified, particularly in light of the results of this study. In large measure, those making the choices and decisions concerning role portrayal in advertisements are men who are probably well into their career and middle-aged or older. On the other hand, their audience is, in many cases, feminine and somewhat younger. It might be suggested, without accusation or indictment, that a "self-reference cycle" operates in the role model decision process. Because the decision maker tends to be somewhat prescriptive of sex roles, there is an automatic assumption, in the absence of counter indications, that the audience shares the role prescriptions in kind and degree. Perhaps this and subsequent work with the sex role scales will encourage use of a wider range of role portrayals in advertisements and promotional campaigns, particularly for feminine products and audiences and for those in the upper socio-economic strata.

### Stereotypes

There appears to be a particular stereotype, common to both academic and commercial institutions and vocations, that the "typical" American family consists of a husband and wife and a couple of children, that the husband is the breadwinner while the wife is principally concerned with homemaking, child care, etc. Like most stereotypes, this one (a) will ordinarily be denied vigorously and universally by everyone, (b) will elicit recognition by everyone that "others" do entertain such a stereotype, (c) that it provides tremendous economy of thought and cleanliness of expectations, (d) was historically rooted, at least in part, in demographic fact, and (e) becomes less accurate, useful and representative as sociocultural conditions and circumstances change. Today, demographers variously estimate that only a small minority of American families actually have a husband-father in the work force and a wife-mother at home looking after the family. Certainly no responsible marketer would assume that the most typical American family lives on a farm or in a rural community, though once it was so. Ironically, there is willingness to relinquish that demographic stereotype in favor of a new image of the metro-consumer, but reluctance to abandon the sociographic or psychographic stereotypes of sex roles.

This research and the future use of the sex role scales may make it more clear that constrained prescription and rigid specification of sex roles does not accurately reflect the consumers' own attitudes and actions. Acceptance of wider ranges of role behavior patterns may sacrifice economy and simplicity in favor of a better representation of the consumer and more effective marketing and promotional efforts.

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SOME CORRELATES OF CONSUMER DISSATISFACTION  
WITH RETAIL COMPLAINT HANDLING PERFORMANCE

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Abstract

The viability of modern-day retail organizations is largely contingent upon the ability of management to monitor and respond constructively to consumerism. Although retailers have made considerable progress in this direction, consumer dissatisfaction remains with certain facets of retail performance, including the capability of retailers to satisfactorily resolve customer complaints.

Introduction

The consumer movement has progressed and become increasingly visible since the decade of the sixties. Consumerism has become a critical component of the retailer's environment, confronting retail decision-makers with new challenges and demands which cannot be ignored if the retail firm is to survive in today's competitive and highly regulated environment. Indeed, the importance of retail responsiveness to consumer pressures is underscored by Moyer's (1975) contention that many retailers may be forced to function as consumer advocates in the near future--a radically new role for most traditional retail managements.

Although Peterson (1974) has demonstrated that retailers can respond profitably to consumerism pressures and Hollander (1972) has shown that many of the variables underlying retail-directed consumerism activities are controllable, actual retail performance in the consumerism arena remains an unsettled issue. Peterson, St. Marie, and Sturdivant (1977) have cited the need for a re-establishment of consumer confidence in retail organizations; Dornoff and Tankersley (1975) have raised serious questions regarding socially responsible business conduct by retail managers; MacLachlan and Spence (1976) have shown that public trust in retail institutions has declined in certain instances; Berry and Wilson (1977) have called for various measures designed to increase corporate citizenship at the retail level; and organizational and managerial changes have been suggested for increasing retail responsiveness (Berry, et al., 1976).

Constructive, profitable responsiveness to consumerism at all levels of distribution is contingent upon a thorough understanding of the composition, magnitude, and motivations of dissatisfied consumer segments. Underlying this premise is the assumption that consumer dissatisfaction with business performance is not a generalized phenomenon but, rather, varied or segmented and possibly determined situationally. Support for this position is to be found in Herrman's (1970) early observation that the consumer movement in general consists of distinct groups pursuing diverse goals and objectives and, also, in various research efforts directed at profiling consumer activists (e.g., Bourgeois and Barnes, 1979). To date, however, relatively little research has appeared in the marketing literature specifically addressing the issue of consumer satisfaction/dissatisfaction with retail performance regarding consumer-related difficulties. It is this task which the present study addresses by focusing upon consumer perceptions of retail complaint handling performance.

Specifically, attitudinal, behavioral, and sociodemographic variables associated with consumer satisfaction/dissatisfaction with retail complaint handling performance will be examined and implications for retail management discussed.

The Study

Data for the study were compiled as a part of an ongoing mail survey of consumer attitudes toward various consumerism issues and dispute resolution mechanisms. A simple random sample of 400 recent purchasers of major consumer durable goods was generated in a large, Southern metropolitan area in the Spring of 1980. Telephone prenotification was conducted where possible prior to mailing, resulting in an overall response rate of 44.5 percent (N=178).

The questionnaire contained a battery of 24 attitudinal items designed to be responded to on five-point, Likert-type scales. A variety of issues relating to various aspects of marketing and government performance and consumer satisfaction in the area of consumer protection and welfare were addressed by the statements. Information was also obtained about consumer activism in, and knowledge about, various agencies, programs, and remedial alternatives presently available to consumers. Additionally, a variety of standard demographic and socioeconomic data was generated, including memberships and participation in various types of organizations.

The sample was divided into two groups by dichotomizing responses to the statement, "Most retailers have little or no ability to effectively handle consumer complaints." Respondents agreeing with the statement (N=83) were assumed to be critical of retailer performance in complaint handling; those disagreeing with the statement (N=95), were assumed to be positive in their evaluation. Attitudinal, behavioral, and sociodemographic variables associated with the two groups were then examined by means of cross-tabulation and correlation analysis.

Findings

Attitudinal Variables

Relationships between the grouping variable and the remaining 23 attitudinal statements were examined *vis-a-vis* Pearson product moment correlations and cross tabulations. The results of this phase of the analysis are reported in Table 1.

Statistically significant correlations were obtained between the grouping variable and 12 of the 23 statements. As expected, those respondents critical of retail performance--those in agreement with the grouping variable--also tended to agree that it is ". . . generally advisable to go directly to the manufacturer" with product-related problems. This orientation may reflect a decline in many consumers' historical reliance on the retailer as a problem solver in the product area, possibly as a result of the greater accessibility of manufacturers to the consuming public through such devices as consumer "hot lines." Alternatively, the

TABLE 1

## ATTITUDINAL CORRELATES OF CONSUMER DISSATISFACTION WITH RETAILER COMPLAINT HANDLING

Statement	Correlation Coefficient	Significance	Percent Agree <sup>a</sup>		Chi Square	Significance
			Critical	Noncritical		
It is generally advisable to go directly to the manufacturer with product problems.	.3080	.003	89.0	74.7	5.019	.03
Unions are necessary to protect employees against the power of big business.	.2643	.001	52.4	35.8	4.310	.04
Business profits are too high.	.3128	.001	58.8	37.6	6.867	.01
Tougher laws are needed to protect the consumer.	.3384	.001	84.1	51.1	20.050	.01
"Let the customer beware" is still the rule today.	.1777	.010	86.3	69.9	5.867	.02
Most product warranties are slanted in favor of the seller.	.2051	.003	89.0	74.7	5.019	.03
Credit makes things too easy to buy.	.1104	.071	94.0	81.9	4.835	.03
Most consumers don't understand credit terms.	.2750	.001	80.7	61.7	6.797	.01
Consumers are well informed about the products they buy.	-.1308	.043	39.0	56.5	4.638	.03
Most company complaint departments do a good job of handling problems.	-.3869	.001	33.7	60.6	11.727	.01
Most companies listen to customer complaints, but don't do anything about them.	.4951	.001	75.3	35.8	25.919	.01
Most consumer complaints involve such small amounts of money that it's not worth going to court.	.1985	.004	84.1	51.1	20.050	.01

<sup>a</sup>"Critical" refers to group agreeing with grouping variable; "Noncritical," those disagreeing.

responses may suggest that many consumers view retailers as being relatively ineffectual and powerless in resolving tangible, product-related problems; i.e., as a result of the trend toward mass merchandising and the subsequent decline of specialized, shop-oriented retail businesses.

Critical subjects tended to be more attuned or sensitive to an imbalance of power between business and the individual. This is suggested by their more frequent agreement that unions are necessary to protect employees and that business profits are too high. Consistent with these responses, this same group tended more frequently to agree that tougher consumer protection legislation is needed and that the classical doctrine "let the buyer beware" is still the guiding philosophy of business. Additionally, they also agreed more often that product warranties are biased or "slanted in favor of the seller"--a response which can also be interpreted from a balance of power perspective.

Although both groups had high absolute agreement frequencies with the statement "Credit makes things too easy to buy," sharp differences were evident between the groups regarding the issue of consumer understanding of credit terms. Clearly, the critical retail performance group was far more likely to agree that most consumers don't understand credit terms, thus suggesting that Truth-in-Lending legislation may have been relatively ineffectual in the opinion of many consumers. Consistent with their negative response toward credit term clarity, the critical retail performance

group also tended more often to disagree that consumers today are well-informed about the products they buy--information about products including, presumably, credit terms attached to these purchases.

Finally, the critical group consistently expressed more frequent dissatisfaction with existing dispute-resolution alternatives available to consumers. They were far less likely to agree that company complaint departments are effective in resolving consumer problems; they agree more frequently that companies listen to customer problems, but fail to take action to resolve them; and they tend to report that the court system is not a viable alternative for most consumers, given the small amounts involved in the majority of consumer transactions.

#### Consumer Activism

Consumers critical of retail performance were expected to be relatively more active in terms of actions taken against businesses than respondents exhibiting a positive orientation toward retail complaint handling. To test this hypothesis, several questions were asked of respondents pertaining to awareness of and participation in various agencies and programs directed at resolving consumer disputes. Specifically, respondents were questioned about their awareness, knowledge, and utilization of arbitral and mediatory programs; actions taken against businesses through small claims courts; and usage rates of such quasi-independent agencies as Better Business Bureaus. Additionally, information was

obtained regarding level of satisfaction with each agency or program from those subjects reporting active participation.

Several findings are of interest. First, statistically significant differences in participation rates and levels of satisfaction were not obtained between the two groups; critical respondents were no more likely to have taken action through small claims courts or to have filed a complaint with the Better Business Bureau than were noncritical subjects. Secondly, the absolute utilization rates of all identified programs and agencies were surprisingly low, averaging less than five percent for both groups. Thirdly, for those respondents who did report active participation, satisfaction with the performance of the agencies or programs in question was consistently low for both groups. Thus, in sum, it cannot be concluded on the basis of these results that it is the consumer activist who tends to be critical of retail complaint handling performance. Rather, many consumers who are critical of retailer performance are not necessarily active in dispute resolution agencies and programs directed at resolving consumer disputes. Clearly, this finding may reflect low awareness levels of the availability of these programs and/or the perception by many consumers that they simply are not viable.

#### Demographic and Socioeconomic Characteristics

Demographic and socioeconomic variables generally did not effectively differentiate the two groups. Statistically significant differences were obtained only for age, education level, and union membership. Critical respondents tended to be younger; cross tabulation analysis revealed that 41 percent of this group was under 35 years of age, compared to 25.8 percent of the noncritical group. Somewhat surprisingly, the noncritical group was found to have generally higher education levels; 76.8 percent reported college training, for example, compared to 60.2 percent of the critical group. Consistent with their pro-union attitudes reported earlier, respondents who were critical of retailer performance more frequently reported union experience; 36.6 percent of this group reported that they presently belonged, or had previously belonged, to a labor union, compared to 23.4 percent of the noncritical group.

Again, the nonsignificant findings are of interest. Statistically significant differences were not obtained for a variety of sociodemographic variables, including occupation, marital status, family size, stage in family life cycle, geographic mobility, race, and annual household income.

#### Discussion

The retailer is the consumer's direct link with the entire marketing channel. As such, the performance of retailers in resolving consumer problems and complaints is of direct relevance to firms at all levels of distribution. Consumer dissatisfaction with retail performance may, obviously, precipitate tougher, more restrictive legislation, further restricting the activities of firms at all levels within the marketing channel.

The results of this survey suggest that consumer dissatisfaction with retail complaint handling is widespread. Over 46 percent of the subjects contacted agreed that retailers were ineffective in resolving consumer complaints. This finding is consistent with Barksdale and Perreault's (1980) recent conclusion that consumerism remains widespread and Stanley and Robinson's (1980) contention that the gap between business and consumer perceptions on consumerism issues and performances may be widening, rather than decreasing.

Consumer dissatisfaction with retail complaint handling may represent only the tip of a much larger iceberg. Indeed, the results of the study suggest that there are a number of correlates associated with retail dissatisfaction, including attitudes toward dispute resolution mechanism, the adequacy of existing consumer protection legislation, and a perceived "caveat emptor" philosophy guiding big business.

The retailer attempting to respond constructively to consumerism pressures may be in a particularly difficult position from an operational perspective. The efficacy and efficiency of any retailer-initiated program is, obviously, contingent upon the ability of management to communicate effectively with dissatisfied consumers. As with any segmentation strategy, there is the requirement of identification--the ability to target marketing efforts precisely and efficiently. However, the results of this survey indicate that dissatisfied retail customers may not be readily identifiable in terms of traditionally relied upon attributes. For example, it was not possible to construct any definitive sociodemographic profile of the dissatisfied retail consumer. Further, it cannot be concluded that the dissatisfied, critical retail consumer is an activist who frequently files complaints at local Better Business Bureaus, confronts merchants in small claims courts, and so forth.

Given the apparent generality of retail dissatisfaction, future research must address other, more diverse correlates of consumer retail dissatisfaction if operational strategies are to be developed. For example, life style variables and situational factors would seem to warrant attention. Additionally, more detailed sets of sociodemographic variables should be evaluated; i.e., by simultaneously initiating controls on multiple variables. Finally, and perhaps most importantly, the sources of retail dissatisfaction must be the subject of future research if a constructive, responsible retail response is to be forthcoming.

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Abstract

This article assesses the impact of corrective advertising on consumer images of the company involved and the FTC. A specially prepared FTC-source corrective ad was found to have a negative impact on company image while improving the image of the FTC. A company-source ad, however, improved company image without affecting FTC image.

plete study was to measure the level of deception in the Listerine ads investigated by the FTC, assess the effectiveness of specially designed corrective ads in reducing residual deception, and provide additional information about the impact of the corrective advertisements on company and FTC images. This article discusses the procedures and results which are relevant to the image issue. Other results are reported elsewhere [Armstrong, Gurol, and Russ, 1979].

Introduction

In the early 1970's the Federal Trade Commission began using corrective advertising as a major weapon in its continuing crusade against deceptive advertising. Several firms whose advertisements were found to be deceptive have agreed to use corrective statements to erase residual misinformation caused by the ads. The increased use of corrective advertising has raised several issues concerning its purpose, effectiveness, and possible side effects.

One issue of concern to advertisers involves the impact of corrective advertising on the image and credibility of the company required to run corrective messages. Many advertisers have expressed the opinion that corrective advertising has a detrimental effect on company image, damaging the firm's credibility to the point that it can no longer compete effectively. As such, corrective advertising could be considered cruel and unusual punishment.

"The FTC's expressed goal in requiring corrective advertising is to provide information to consumers, not to punish advertisers by harming their images and credibility. Robert Pitofsky, then Director of the Bureau of Consumer Protection at the FTC, stated that the purpose was "not to embarrass or disgrace corporations, but to dissipate misleading impressions with a solid dose of accurate information. We also believe this remedy will help restore competition to the situation that prevailed before the fraud or deception improperly influenced preexisting market shares [Wark, 1971]." Thus, the FTC's objectives in requiring corrective advertising are to correct consumer misimpressions and to restore competition. The Commission, however, has not shown concern for possible side effects such as damage to a company's image.

The current corrective advertising campaign for Listerine highlights these issues [Warner-Lambert 1975, 1978a, 1978b]. An FTC order requiring that \$10,000,000 of Listerine television ads carry a corrective message was upheld by the courts in the fall of 1977. The corrective ads, containing wording specified by the FTC\* began appearing in the media in the fall of 1978. The FTC has a major study underway to assess the effectiveness of the corrective advertising in eradicating the deception and restoring the competitive situation. The study, however, does not attempt to assess the effects of the corrective ads on various components of company image.

Purpose

This article reports some of the results of a study undertaken prior to the start of the Listerine corrective campaign [Gurol, 1977]. The purpose of the com-

Literature Review

Source credibility is very important in persuasive communication. As one writer summarizes, "people seem to place greater confidence in a trustworthy source and hence are more receptive to what is said [Sternthal, 1972]." A corrective advertising requirement would indeed be punitive if the result were to tarnish the offending company's credibility and damage its image. If in fact, the FTC wishes to avoid punishment, it must find a way to accomplish its corrective advertising goals while minimizing the damage done to the company's image.

"The communication literature provides two clues. First, Walster and others [1966] have pointed out that "even a communicator with every low credibility may be quite influential if he argues contrary to his self-interest." Koeske and Crano [1968] obtained similar results. Second, studies in noncommercial contexts found that the use of two-sided appeals may have a positive effect on perceived source credibility. Walster and other [1966], for example, showed that presentation of both pro and con arguments seemed to increase source credibility. Faison's research suggests that two-sided appeals may be more effective in influencing consumers [1961].

Combined, these two groups of findings indicate that corrective advertising may have some unintended effects. When manufacturers make negative admissions publicly in their advertising, "the result...may be to enhance the credibility of the advertiser in the consumers' eyes and hence increase his promotional effectiveness.

This, of course, would be contrary to the result intended by the FTC [Engel, Kollat, and Blackwell, 1973]."

The marketing literature related specifically to remedial advertising and its effect on company and FTC images consists of three sets of experiments. Hunt [1972a, 1972b], while investigating the effects on counter ads from various sources on attitudes toward a product [Standard Oil of California's Chevron F-310], also measured their effect on company and source repu-

\*The original order [see Warner-Lambert 1975] was: "Contrary to prior advertising, Listerine will not help prevent colds or sore throats or lessen severity." The appeals court ordered [see Warner-Lambert 1978a] the deletion of the phrase "contrary to prior advertising" because it felt that it was not needed to call attention to the corrective message that was to follow and this case was not egregious enough to warrant its use for humiliating the advertiser [p. 763]. In a footnote the court stated: "We express no view on the question whether an order intended to humiliate the wrongdoer would be so punitive as to be outside the Commission's proper authority [p.768, note 69]."

tations. Hunt found that "perceived truthfulness of the sources was about the same before and after exposure to the counter ad except for the corrective ad situation. Being required to admit in one's own ad that previous ad claims had been false caused a substantial drop in perceived truthfulness of the corrective advertiser [1972b, p. 336]." This finding seems contrary to the predictions of the general literature on source credibility.

Dyer and Kuehl [1972, 1974] studied the effects of both print and radio corrective ads about a diet soft drink and a suntan lotion on the company image. In the print version only, an FTC-source, high-strength message resulted in a more unscrupulous company image while company-source, high-strength treatments brought a more trustworthy image. This last finding is similar to the findings in communication research.

Kassarjian, Carlson, and Rosen [1975] examined the effects of corrective advertising on the retailer carrying the product (a motorcycle safety device). They "used a local newspaper advertisement for a brand of product not nationally recognized and attempted to assess the impact of corrective advertisement about his own name." After seeing the corrective ad, the subjects perceived the product as significantly less desirable but the image of the retailer did not change significantly. That is, "negative effects created by a corrective advertisement do not generalize to the local retailer who placed the ad, in this case for an item not identified by a nationally known brand name."

Although each of these studies was a significant step toward understanding the impact of corrective advertising on corporate and agency images, their inconsistent results and the lack of realism of the corrective ads used makes additional study worthwhile.

## Methodology

### Experimental Procedure

In the study reported here, the corrective message ordered for Listerine by the FTC was imbedded in a filmed commercial and evaluated in an experimental setting. The purpose was to determine, among other things, the impact of the corrective ad on company and FTC images.

134 subjects assigned randomly to three groups were shown a deceptive Listerine ad film chosen from a reel of 29 ads held by the FTC as evidence in the Warner-Lambert case.\*\* They were then asked to complete semantic differential scales measuring their images of Warner-Lambert and the FTC. Throughout the study, ads of interest were mixed with ads for irrelevant products in order to disguise the purpose of the research. Next, the first group was shown a company-source corrective ad, the second group was shown an FTC-source corrective ad, and the third group was shown an irrelevant ad. All subjects were then requested to complete the semantic differential scale again.

### Subjects

The subjects of the study were students enrolled at a large state university who responded to solicitations for volunteers and a small monetary inducement to participate. A sample consisting of student and non-

student subject might have been more representative of relevant consumers. But students do represent a segment of relevant consumers (61% were using Listerine or had used it previously). And there may not be that much difference between student consumers and non-student consumers. The SBT results for the food product and finance company ads in this study (using students) were similar to the results of a previous study using the same ads with a sample consisting of non-student adults with a wide range of ages [Armstrong, Kendall and Russ 1975].

### Treatments

Two corrective ads were professionally filmed for this experiment. The two ads were identical except for the introductory sentences which identified the message source. In one ad, the company (Warner-Lambert) was identified as the source, while in the other ad the FTC was identified as the source. Exhibit 1 provides the text of the corrective message used. Throughout each corrective ad, relevant props were used to identify the message source visually.

### EXHIBIT 1 TEXT OF THE CORRECTIVE ADVERTISEMENT

Hello, I am Walter Hughes (fictitious name), representing (Warner-Lambert or the Federal Trade Commission).

Contrary to prior advertising of Listerine, Listerine will not prevent or cure colds or sore throats, and Listerine will not be beneficial in the treatment of cold symptoms or sore throats.

Listerine is an antiseptic which kills germs on contact. It is effective for general oral hygiene, bad breath, minor cuts, scratches, insect bites and infectious dandruff. But it is not effective against colds and cold symptoms, because colds are caused by viruses and Listerine does not kill viruses.

The first paragraph of the message identifies the source. The second paragraph specifies the negative attributes of the product as required in the final order of the FTC. The first two sentences of the final paragraph specify positive attributes as they are stated on the Listerine label. The final sentence explains the reasoning behind the negative attributes mentioned in the second paragraph.

In both ads, the message is read by an actor in a straightforward narrative. The message is objective in that both the positive and negative claims have been supported by medical evidence. The message is two-sided, containing three negative and six positive claims.

### Measures

The semantic differential scales used the following pairs of adjectives: powerful/weak, warm/cold, deliberate/careless, modern/old-fashioned, successful/failure, outgoing/withdrawn, and trustworthy/unscrupulous. The first four pairs were taken from Green and Tull [1975, p. 194], and the last three from Dyer [1972, p. 143]. Scores were assigned to the scale such that the positive extreme received a "7" and the negative extreme received a "1".

### Analysis of the Data

The semantic differential scales were analyzed in two ways. First, in order to determine the effects of the corrective message on overall company and FTC images, a vector was formed by subtracting the second scores

\*\*The film we have used (Exhibit No. CXID-34) was duplicated from the FTC files by a professional motion picture company and it is almost impossible for a nonprofessional to differentiate it from the original.

of each bipolar scale from the first scores of the same scale. This vector was tested against a vector of "0"s to see if there was a significant change in overall image. Second, to determine the effects of the corrective message on company and FTC images with respect to the individual attributes represented by each scale, the scales were evaluated individually. The difference between the first and second measurement for each scale was tested against "0" to determine if there was a significant change in company or FTC image on that scale.

### Results

Results for the portion of the study dealing with levels of deception caused by the Listerine advertisement, and the effectiveness of the corrective ads in reducing deception, are reported in detail elsewhere [Armstrong, Gurol, and Russ 1979]. Briefly, it was found that deception levels did increase significantly as a result of exposure to the deceptive Listerine ad, and that both corrective advertisements used in the study caused significant reductions in deception levels. In addition, with respect to reducing deception, no source effect was found. The company-source and FTC-source corrective ads appeared to be equally effective in reducing deception levels.

With regard to company and FTC images, however, the two corrective ads produced differing results. The results of the study pertaining to the impact of the corrective advertisement on company and FTC images are reported below.

#### Effect on Company Image

The changes in company image resulting from exposure to the corrective advertisements are reported in table 1 and represented visually in figure 1.

TABLE 1  
COMPANY IMAGE BEFORE AND AFTER EXPOSURE TO  
COMPANY-SOURCE AND FTC SOURCE CORRECTIVE  
ADVERTISEMENTS

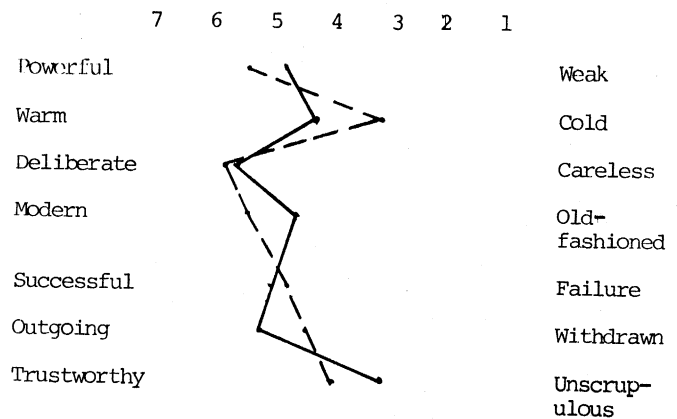
#### A. Company-Source Corrective Advertisement (Overall: $p < .009$ )

	Before	After	Difference	$p <$
Powerful-Weak.....	4.78	5.25	0.47	.09
Warm-Cold.....	4.34	3.28	-1.06	.002
Deliberate-Careless....	5.50	5.66	0.16	.68
Modern-Old-Fashioned...	4.62	5.38	0.75	.03
Successful-Failure.....	4.91	5.06	0.16	.59
Outgoing-Withdrawn....	5.25	4.69	-0.56	.06
Trustworthy-Unscrupulous	3.31	4.34	1.03	.02

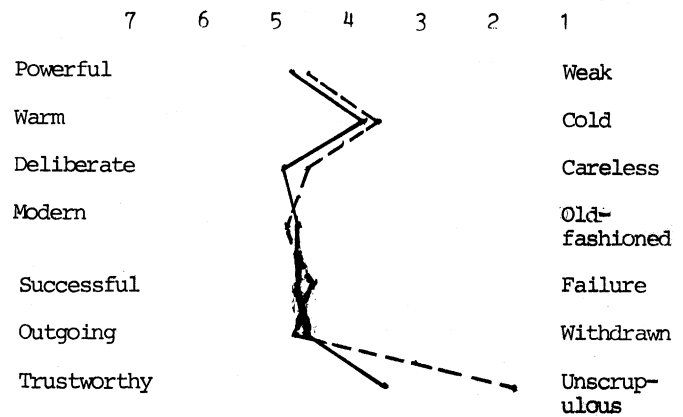
#### B. FTC-Source Corrective Advertisement (Overall: $p < .001$ )

	Before	After	Difference	$p <$
Powerful-Weak.....	4.81	4.53	-0.28	.36
Warm-Cold.....	3.94	3.66	-0.28	.26
Deliberate-Careless....	5.00	4.59	-0.41	.21
Modern-Old-Fashioned...	4.72	4.84	0.13	.59
Successful-Failure.....	5.00	4.72	-0.28	.17
Outgoing-Withdrawn....	4.56	4.69	0.12	.44
Trustworthy-Unscrupulous	3.69	1.78	-1.91	.001

FIGURE 1  
CHANGES IN COMPANY IMAGE  
A. COMPANY-SOURCE CORRECTIVE AD



B. FTC-SOURCE CORRECTIVE AD



————— First Measure  
----- Second Measure

The company-source corrective ad caused a significant ( $p < .009$ ) change in the overall company image [table 1A, figure 1A]. Two scales contributed most significantly to this overall image change. The company was seen as less warm ( $p < .002$ ) but more trustworthy ( $p < .019$ ). Furthermore the company was viewed as less outgoing ( $p < .059$ ), but more modern ( $p < .030$ ) and powerful ( $p < .092$ ). On the whole, therefore the admission by the company that it had been making some unsubstantiated claims appears to have a positive impact on the company's overall image. While the company is perceived as less warm and outgoing, it is also perceived as more trustworthy, modern, and powerful. Its credibility and competitive posture may well have been enhanced by the corrective advertisement.

The change in overall company image caused by the FTC-source corrective ad was also highly significant ( $p < .001$ , table 1B and figure 1B). The nature of the image change, however, was considerably different from that produced by the company-source advertisement. Only one image component changed significantly. As a result of the FTC-source ad, the company was seen as significantly less trustworthy ( $p < .001$ ). Thus, while the seemingly willful disclosure by the company appears

to have enhanced the company's credibility, the same disclosure by the FTC appears to have greatly reduced that credibility.

Effects on the FTC Image

The changes in FTC image caused by the corrective ads are reported in table 2 and figure 2.

TABLE 2

FTC IMAGE BEFORE AND AFTER EXPOSURE TO COMPANY-SOURCE AND FTC-SOURCE CORRECTIVE ADVERTISEMENTS

A. Company-Source Corrective Advertisement (Overall:  $p < .040$ )

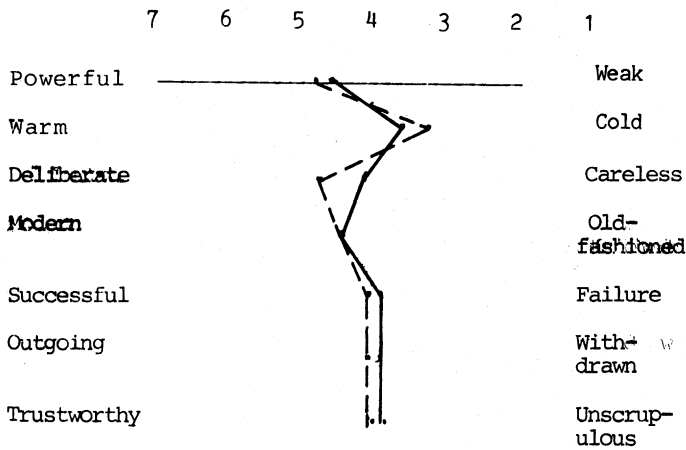
	Before	After	Difference	P<
Powerful-Weak.....	4.59	4.69	0.09	.65
Warm-Cold.....	3.56	3.22	-0.34	.09
Deliberate-Careless....	4.16	4.75	0.59	.02
Modern-Old-Fashioned....	4.38	4.38	-0.00	1.00
Successful-Failure.....	3.91	4.03	0.13	.57
Outgoing-Withdrawn.....	3.91	4.00	0.09	.62
Trustworthy-Unscrupulous	3.88	4.00	0.13	.46

B. FTC-Source Corrective Advertisement (Overall:  $p < .001$ )

	Before	After	Difference	p<
Powerful-Weak.....	5.00	5.44	0.44	.02
Warm-Cold.....	3.25	3.50	0.25	.48
Deliberate-Careless....	4.22	5.50	1.28	.00
Modern-Old-Fashioned....	4.41	4.81	0.41	.17
Successful-Failure.....	4.13	5.13	1.00	.001
Outgoing-Withdrawn.....	3.91	4.25	0.34	.23
Trustworthy-Unscrupulous	4.28	4.94	0.66	.009

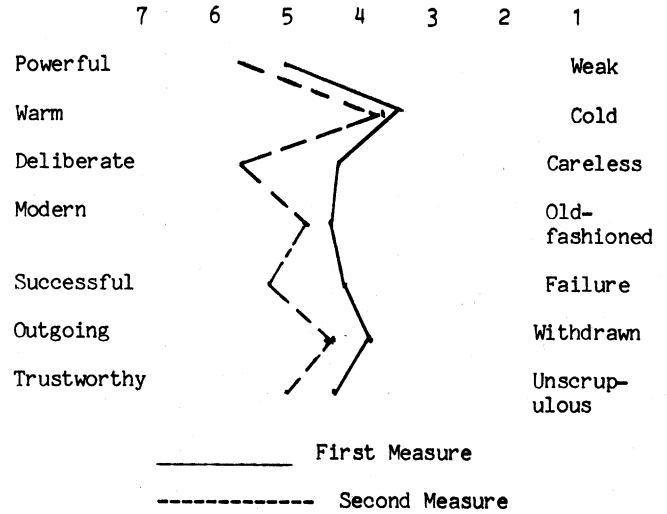
FIGURE 2

A. CHANGES IN FTC IMAGE COMPANY-SOURCE



The company-source corrective advertisement caused a significant change in the overall FTC image ( $p < .040$ , see table 2A and figure 2A). The FTC was perceived as more deliberate ( $p < .022$ ) but somewhat less warm ( $p < .086$ ). On the whole, the image change is neither strongly positive nor strongly negative.

B. FTC-SOURCE



The FTC-source corrective ad caused a highly significant ( $p < .001$ ) change in the overall FTC image (see table 2B and figure 2B). Furthermore, the image change is heavily positive. After making the disclosure of the company's prior misdeeds, the FTC was perceived as more successful ( $p < .001$ ) trustworthy ( $p < .009$ ), and powerful ( $p < .024$ ).

Analysis of the results for the control group, which received the deceptive but not the remedial messages suggested significant changes on only two scales. (see table 3). The company was seen as less outgoing, while the FTC was perceived as more powerful (although the overall change in FTC image was insignificant).

TABLE 3

COMPANY AND FTC IMAGES IN CONTROL GROUP

A. Company Image (Overall:  $p < .010$ )

	Before	After	Difference	p<
Powerful-Weak.....	5.15	5.27	0.12	.54
Warm-Cold.....	4.55	4.33	0.21	.28
Deliberate-Careless....	5.30	5.46	0.15	.26
Modern-Old-Fashioned....	4.39	4.67	0.24	.19
Successful-Failure.....	5.76	5.64	-0.12	.25
Outgoing-Withdrawn.....	5.27	4.85	-0.42	.001
Trustworthy-Unscrupulous	3.73	3.85	0.12	.57

B. FTC Image (Overall:  $p < .307$ )

	Before	After	Difference	p<
Powerful-Weak.....	4.848	5.242	0.393	.017
Warm-Cold.....	3.485	3.545	0.061	.712
Deliberate-Careless....	4.545	4.727	0.182	.184
Modern-Old-Fashioned....	4.545	4.636	0.091	.521
Successful-Failure.....	4.212	4.455	0.242	.147
Outgoing-Withdrawn.....	4.121	4.061	-0.061	.773
Trustworthy-Unscrupulous	3.879	3.697	-0.182	.311

Discussion

The FTC-source and company-source corrective advertisements produced dramatically different effects on FTC and company images. While the FTC-source ad was no more effective in reducing levels of deception, it had a

substantial negative effect on the company's image, especially its trustworthiness. At the same time, the advertisement served to substantially improve the FTC's image.

The company-source corrective advertisement, on the other hand, had a somewhat positive effect on company image. This was true even though the ad took the form of a direct and objective narrative which indicated, in no uncertain terms, that the company had misinformed consumers in its previous advertising. It did not, however, affect the FTC's image in a substantially positive or negative direction.

#### Conclusions

The increasing use of corrective advertising as a remedy in cases where deception in advertising is found adds importance to issues of its purpose and effects. While some information has been obtained concerning the effectiveness of corrective advertising in reducing or eliminating deception, there is little information available concerning its side effects.

Most studies so far have indicated that corrective advertising can be effective in reducing the level of misinformation caused by previous advertising. The results of this study suggest several interesting conclusions regarding an important side-effect of corrective advertising--its effect on company and FTC images.

It appears that corrective advertising does significantly affect the image of the offending company, and the image of the FTC as well. The nature of the effect, however, may be beneficial or punitive to the company depending on whether the corrective message is provided by the company or the FTC. Thus, a dilemma is generated. While the FTC has stated that it does not intend harm to a company's image through the corrective advertising requirement, it seems unlikely that the intent is to improve the offending company's image and credibility. The question arises as to whether the company should be punished or allowed to benefit with respect to image. The answer depends almost entirely on the point of view.

On the other hand, it could be argued that the offending company unfairly enhanced its image in the past through deceptive means, and that the harm done by FTC-source corrective advertisement would help to restore competition to its previous levels. On the other hand, it could be argued that the Commission's expressed objectives are accomplished when the message is delivered by either source, and that the damage done to the company's image by an FTC-sponsored message is too extreme. Furthermore, in a company-sponsored corrective ad, the company is confessing its prior wrongdoing (whether willfully or not) and it, therefore, acting in a manner which warrants more trust.

Before attempting to answer questions about the acceptability of the effects of corrective advertising, we must have a better understanding of just what these effects are. While much research attention is being given to the effectiveness of corrective advertising in reducing residual deception, too little is being given to possible side effects. While there are many points of view and opinions concerning the nature and extent image and other side effects, there is little evidence to support these opinions.

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## NUTRITION LABELING: AN EVALUATION OF CONSUMER ATTITUDES

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### Abstract

While numerous programs requiring more information disclosure have become law, little attention has focused on measuring their impact on consumer attitudes and behavior. This paper reports the results of an experiment which employed an unobstrusive research method to measure consumer attitudes toward nutrition labeling. The findings suggest that consumers are passive about having more nutrition information on food product labels. However, prior messages about nutrition labeling by an authoritative source may be an effective vehicle to sensitize consumers about the value of nutrition information.

### Introduction

Consumer activists and public policy officials have argued that marketers should be required to disclose more information about their products and services. Support for their position can be traced to the consumers' "right to be informed" as expressed by the late President Kennedy in 1963. The "right to be informed" concept goes beyond the principle of avoiding misrepresentation--it involves providing consumers with sufficient information to help them make wise purchase decisions (1). Consumer leaders have argued that people will be able to perform more effectively in the marketplace when these comparative data are available. However, some researchers (7) have pointed out that formal education may not be sufficient to prepare consumers for the process of product evaluation and comparison. Jacoby, Speller and Kohn (9) found that too much information can be dysfunctional--people made sub-optimal decisions under a high information level experimental condition.

Nonetheless, numerous product information programs have become law; from beef grading to truth-in-lending. Many others have been proposed and several will likely become law (11). Unfortunately, far too little effort has been applied to studying the impact of such programs upon consumer attitudes and behavior. This research examines consumer attitudes toward food products which contain a relatively new type of product information--nutrition information.

On June 30, 1975, the nutrition labeling regulation became law. It requires food manufacturers or processors to provide data about their product's nutritional value if any nutrient is added to the food or if some nutritional claim is made on the label or in advertising (6). For example, if the producer makes any reference to dieting (on the label or in advertising), the package must provide nutrition information (5). When the information is supplied, it must conform with a standard nutritional format developed by the FDA.

Nutrition labeling advocates have assumed that the availability of nutrition information would help consumers make better food purchase decisions. In theory, the information would serve to shift demand from brands offering little nutritional value to brands offering more value. Obviously, such behavior would be desirable especially among low income groups. However, previous research dealing with other types of consumer informa-

tion suggests that the intended benefits may not be realized easily. Research by Kilbourne (10), Miller, Topel, and Rust (11), and Day and Brandt (4) has demonstrated that consumers are very slow to adopt product information. To increase consumer awareness and adoption of nutrition label information, the FDA developed an introductory promotional campaign which included radio and television commercials in addition to brochures for consumers.

While some consumer research exists pertaining to nutrition information, it does not provide a systematic and unbiased estimate of consumer attitudes toward nutrition labeling. For example, Asam and Bucklin (2) studied the communications value of different terms used to describe the nutritional content of canned peas. Stokes (13) studied the communications value of different nutrition information formats. Direct questioning was used by Stevan (12) to measure consumer attitudes toward nutrition labeling. Direct questioning about the nutrition labeling concept may lead to considerable overstatement of attitudes by consumers. This research measured consumer attitudes toward nutrition labeling by way of a more indirect method.

### Purpose of the Research

Based upon the previous research, it was hypothesized that products which supply higher levels of product information would be judged more favorably by consumers than products which provide lower levels of product information. Such a relationship, if discovered, would establish support for the importance of information. Promotional messages about an information program may also have some impact on consumer attitudes toward the program. Thus, it was hypothesized that consumer attitudes toward products which carry a specific type of product information would vary with the introduction of promotional messages. Both relationships were tested within the framework of the nutrition labeling program:

- H<sub>1</sub>: Higher levels of nutrition information on a food product label will create more favorable attitudes toward the product.
- H<sub>2</sub>: The introduction of nutrition labeling advertising messages will influence consumer attitudes toward food products which supply nutrition information.

### Methodology

#### Research Design

A 3 x 3 factorial experimental design was developed to test the above relationships. The two experimental variables were introduced to subjects (Ss) simultaneously in a laboratory setting. One variable represented exposure to nutrition labeling advertising messages (NAM) at various levels. The other variable dealt with the amount of nutrition information provided on the label (NIL). Each variable had three treatment levels--high, medium and low. A schematic of the

research design is provided in [Table 1](#).

TABLE 1

SCHMATIC OF THE RESEARCH DESIGN AND  
SAMPLE SIZE PER TREATMENT

Nutrition Advertising Level	Nutrition Information Level		
	Low	Medium	High
Low	15	15	15
Medium	15	15	15
High	15	15	15

A self-administered questionnaire was developed to measure consumer reaction to the advertising and product stimuli. The questionnaire contained a small battery of questions which pertained specifically to the product stimulus. The objective was to measure Ss' attitudes toward the stimuli and gather basic demographic and life style information. Three product-related questions were used as indicators of the Ss' attitudes toward the test product; overall opinion and perceived nutritional value (measured on seven-point hedonic scales), and purchase interest (measured on an eleven-point purchase probability scale). Thus, differences attributed to the manipulation of the NAM and NIL factors could be measured by examining the attitudinal dependent variables between experimental treatments as all other design aspects remained constant.

Subjects

The research was conducted among 135 adult women in a medium-size, mid-Atlantic city. While family member roles are changing, data developed by Haley and Overholser (8) indicate that adult women are still the most important segment of consumers for food purchase decisions. Ss were recruited at two large shopping malls and the test was administered in a central location in the mall. Ss were randomly assigned to one of the nine experimental conditions with 15 Ss per cell.

Experimental Procedure

After agreeing to participate in the research, Ss were given a portfolio to examine which contained ten newspaper advertisements. One of the advertisements was a test ad which promoted the nutrition labeling information program. The other nine advertisements contained promotional messages for a wide variety of products and services. The objective was to briefly expose Ss to messages about nutrition labeling (as the FDA planned to do in launching the program), thereby extending the external validity of the experiment. Since the FDA ads would not be viewed in isolation, a competitive advertising environment was created for the research. As mentioned earlier, the experiment was designed to permit multiple message exposures among some Ss. Specifically, some Ss viewed one portfolio (low exposure level), while others viewed two portfolios (medium exposure level) or three portfolios (high exposure level). [Table 2](#) describes the message content of the advertising portfolios. A short, dummy questionnaire was distributed to Ss after the portfolio(s) were examined.

After a short break, Ss were given an unfamiliar pack-

aged food product to briefly examine. The package displayed typical types of objective product information

TABLE 2

PORTFOLIO COMPOSITION

Advertisements	Message Class
1	Cigarettes
2	Bread Products
3	Automobiles
4	Vegetables
5	Test Ads
6	Spirits
7	Milk Products
8	Jewelry
9	Car Rental
10	Other Foods

(ingredients list, price, weight, etc.) in addition to various promotional elements (brand name, usage suggestions, etc.). Among the various design elements was a panel containing nutrition information. Some of the Ss examined a product with a low level of nutrition information (5 items), while others examined an identical product with a medium level of nutrition information (14 items), or a high level of nutrition information (19 items).

On the basis of a consumer pilot test with 15 women, a product judged to be moderately low with respect to its nutrition value, was selected as the test product. The author wished to see if manipulation of the experimental variables would have any impact on the way people judged a product not noted for its nutritional benefit. In other words, would consumers attitudes toward such a product be likely to change by merely introducing the experimental variables? An unfamiliar seven-ounce box of vanilla wafers, with a fictitious brand name, was used as the product stimulus.

Analysis

The data were analyzed through use of both univariate and multivariate analysis of variance. Multivariate analysis of variance (MANOVA) is a generalization of the classical ANOVA model to cases in which more than one dependent variable is involved. A univariate analysis, one which examines the mean values of each response variable separately, ignores the intercorrelations among the three response variables.

The MANOVA results, which are shown in [Table 3](#), indicates that the response centroids for the nine experimental groups were indeed different at the .05 level of significance. However, the NIL factor (nutrition information level) was not statistically significant

TABLE 3  
MANOVA RESULTS

	F Value	Degrees of Freedom	Significance of F
Nutrition Advertising Message (NAM)	2.477	248	.024
Nutrition Information Level (NIL)	.849	248	.533
NAM x NIL Interaction	1.444	328.363	.144

across the set of criterion variables. The differences in response centroids appear to be attributed to the NAM factor (nutrition advertising message). In other words, exposure to messages about nutrition labeling had a real influence on consumer attitudes toward the product stimulus. The effects due to interaction (NAM x NIL) were found not to be statistically significant.

Table 4 describes the results of the univariate ANOVAs which examined differences between treatments for each criterion variable considered separately. The univariate ANOVAs provide a check for stability of the MANOVA findings as well as a procedure for examining test group differences more closely. First, the response variable overall opinion was examined separately and the analysis revealed a statistically-significant main effect for NAM while the NIL and NAM x NIL effects were not significant. The same general pattern was found for the next dependent variable, purchase probability--the only statistically significant effect was attributed to NAM. The ANOVA results for the last dependent measure, perceived nutrition value were slightly different. As shown in Table 4, there was a statistically-significant interaction effect in addition to the significance of the NAM factor (again, NIL was not significant).

Since manipulation of the NAM variable produced statistically significant differences on each dependent variable, the author proceeded to determine the nature and direction of the differences. This was done by simply plotting the mean values of the dependent variables at the various NAM levels. The results are displayed in Figure 1 (overall opinion), Figure 2 (purchase probability), and Figure 3 (perceived nutrition value). As clearly shown, the relationship was a negative one for each dependent variable. As the number of messages went up, Ss' attitudes toward the test product went down.

#### Discussion of the Findings

Based on these results, H<sub>1</sub> was rejected and H<sub>2</sub> was not rejected. In other words, consumers' attitudes toward a food product were not influenced by the amount of information provided on the label. Ss' attitudes toward the test product remained fairly even although the level of nutrition information increased. The findings suggest, however, that consumers' attitudes toward food products may change if they are exposed to promotional messages about nutrition labeling. Ss downgraded the test product (which initially was perceived to be low in nutrition value) when advertising messages about nutrition labeling were provided. Thus, repeated

TABLE 4  
UNIVARIATE ANOVA RESULTS

	Sum of Squares	df	Mean Square	F ratio	Significance
<b>Overall Opinion:</b>					
<b>Main Effects</b>					
Advertising Level	19.600	2	9.800	6.352	.003
Nutrition Level	1.378	2	.689	.447	.999
Interaction Effect	1.556	4	.389	.252	.999
Error	<u>194.400</u>	<u>126</u>	<u>1.543</u>		
Total	216.933	134	1.619		
<b>Purchase Probability:</b>					
<b>Main Effects</b>					
Advertising Level	63.348	2	31.674	3.760	.025
Nutrition Level	15.348	2	7.674	.911	.999
Interaction Effect	27.141	4	6.785	.805	.999
Error	<u>1061.467</u>	<u>126</u>	<u>8.424</u>		
Total	1167.304	134	8.711		
<b>Perceived Nutrition Value:</b>					
<b>Main Effects</b>					
Advertising Level	15.126	2	7.563	3.053	.049
Nutrition Level	1.348	2	.674	.272	.999
Interaction Effect	25.274	4	6.319	2.551	.042
Error	<u>312.133</u>	<u>126</u>	<u>2.477</u>		
Total	353.881	134	2.641		

FIGURE 1  
MEAN VALUES FOR OVERALL RATING  
VARIABLE AT THREE ADVERTISING  
LEVELS

Mean on  
7-point  
Scale

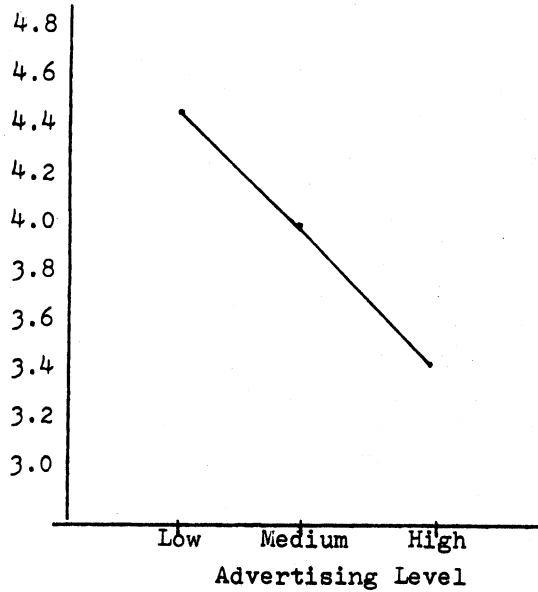


FIGURE 2  
MEAN VALUES FOR PURCHASE PROBABILITY  
VARIABLE AT THREE ADVERTISING LEVELS

Mean on  
11-point  
Scale

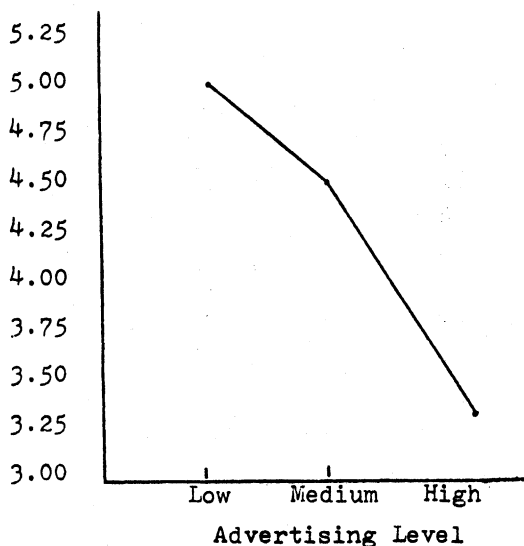
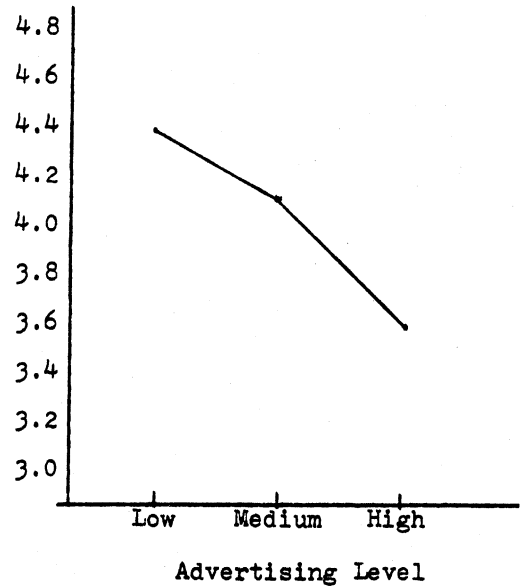


FIGURE 3  
MEAN VALUE FOR PERCEIVED NUTRITION  
VARIABLE AT THREE ADVERTISING LEVELS

Mean on  
7-point  
Scale



exposure to promotional messages about nutrition labeling (by the FDA or other authoritative sources) may have the desirable result of making people conscious of the nutrition value of packaged food products. Further research with other classes of food products and other types of product information is needed to confirm these relationships.

As with other forms of consumer research, it is important to recognize the limitations of measuring individual attitudes via a highly-structured research environment. Attitudes are mental states which are often difficult to assess precisely. Additionally, the experiment was conducted in a central location under controlled conditions. Under normal circumstances, it is doubtful that the product stimuli would have received such close attention from consumers. However, these limitations prevailed equally across all treatments and should not have affected the overall comparative results.

#### Conclusions and Implications

This research was designed to provide an indirect measure of consumer reaction to the nutrition labeling program while avoiding attitude overstatement, which often results from direct questioning. Although earlier consumer research indicated a high level of interest in nutrition labeling, this experiment showed a low level of consumer involvement. However, the research also demonstrated that it may be possible to stimulate consumer involvement by introducing promotional messages which deal with the concept of nutrition labeling. Thus, to increase the adoption of new forms of product information by consumers, public policy officials should strongly consider promotional activities. In other words, it does not seem to be enough to just

provide the information, additional steps are necessary to encourage consumers to utilize the information. Adoption may also be facilitated by discovering better ways to communicate the information while simplifying the information processing task.

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COMPETITION BETWEEN ORIGINAL BRANDS AND GENERICS IN PHARMACEUTICALS:  
ANALYSIS AND POLICY IMPLICATIONS

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Abstract

This paper will discuss the significant price differences between original pharmaceutical products and generic drugs which continue to exist long after introduction of lower-priced generics. Apparently, uncertainty about generic quality allows the original brand to maintain a superior image and substantial market share, despite intensive competitive activity. The effectiveness of promotion in maintaining substantial market share after patent expiration is illustrated for Librium(R). Existing policies concerning generic drugs are reviewed, and appropriate revisions will be recommended.

Pharmaceutical Promotion

The Structure of the Pharmaceutical Industry

The federal government grants legal monopoly rights through patents. During the 17-year patent period a firm has exclusive use of all benefits derived from the protected product. After patent expiration, competitors may enter the market.

Critics of generic drugs argue that some generic producers have encountered fewer regulations in introducing their drugs than did the original manufacturers. While new drugs must be proven safe and effective, and pass many clinical tests, some generic products obtained market approval by submitting little more than evidence of chemical equivalence of the active ingredient, and compliance with Good Manufacturing Practices (Schwartzman, 1976). Critics claim that the generics may contain different inert ingredients which may lead to different blood absorption rates (bioavailability) and side effects, and that dosage measurements, cleanliness standards, and ingredient quality may vary between manufacturers.

These issues are currently being debated in the Federal Courts (*American Pharmacy*, 1980). This paper will not deal with the relative safety of generic drugs, but rather the implications of consumer perceptions.

The following terminology will be used for pharmaceutical products: a "branded drug" is patent-protected; a "branded generic" is sold under a non-proprietary name by a firm with its own branded line; a "generic" is a chemically equivalent drug marketed by a firm without a branded line of its own. The generic source may be a major pharmaceutical firm, or a virtually unknown producer.

When a drug patent expires, the original firm has several choices: lower the price, to limit competitive entry; maintain existing price and maximize short run profits, while allowing lower-priced generics to enter the market; or intensify brand promotion to combat competitive penetration.

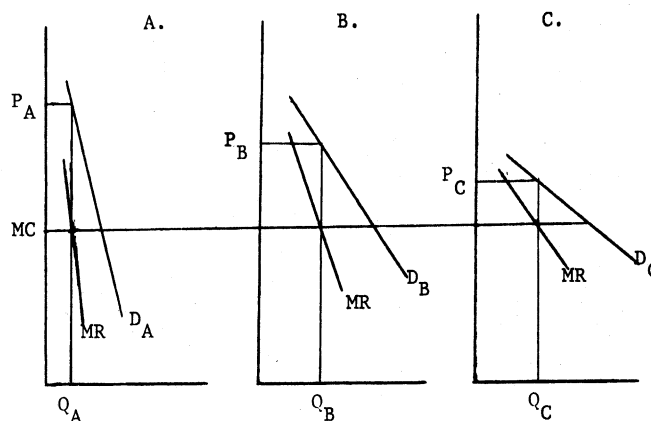
Given an industry with high-priced originals, and a potential proliferation of generics, we might expect that a high elasticity of demand with respect to price would eliminate large price differences. However, differences continue to exist long after competitive

entry, and despite enactment of many state substitution laws, and increasing numbers of generically written prescriptions.

One explanation for this is effective promotion by major firms. If the original manufacturer develops a quality image, lower priced generics may enter the market and not pose a sufficient threat to induce price competition (Schwartzman, 1976). This can best be explained by examining the market from a price elasticity perspective, as shown in [Figure 1](#).

FIGURE 1

RELATIVE ELASTICITY AND PRICES



Curve A depicts branded drug purchases when a higher-priced original is preferred over a generic substitute. We observe low elasticity, since this market segment believes there is no close substitute for the original. Curve B illustrates market behavior when a group is willing to take some risk of a generic produced by a well-known manufacturer. Greater price sensitivity is apparent since, presumably, the selection of a generic indicates a desire to purchase at lower prices. Curve C illustrates the segment willing to risk an unbranded generic to purchase at lowest cost. This group has a highly elastic demand curve. Such different market responses allow manufacturers to price differently among these groups, even if marginal cost is the same for all firms.

So the question becomes: "How have original drugs been successfully differentiated from branded and unbranded generics?" This paper will argue that the answer is: "Effective Promotion" by large pharmaceutical firms.

Product Differentiation By Quality Image

Content of current promotional campaigns indicate that pharmaceutical firms are well aware of the quality issue. Original manufacturers stress product quality and superior manufacturing processes.

Branded generics are often developed by a major firm to "round out" the product line in those areas in which it does not already have a patent. They will gain most of the market lost by the original drug after patent expiration, and will generally be priced lower than the original drug. Their producers stress company reputation, product liability coverage, quality control procedures, and lower cost. In addition, they frequently offer discounts on their patented products with generic purchases.

Generic drugs are advertised primarily in trade journals. They utilize mail order and regular distribution channels. The primary goal is overcoming quality objections and assuring the pharmacist of minimal risk.

The purchase decision for a pharmaceutical product involves three parties: physician, pharmacist and patient. Different promotion strategies are used to reach these groups. Manufacturers of brand-name drugs promote to physicians and pharmacists, emphasizing the firm's knowledge of a drug's quality, purity and potential side-effects. Manufacturers of branded generics also promote to these groups, stressing lower price and firm reputation. Generic firms promote mostly to pharmacists and the consumers, stressing chemical equivalence and price advantage.

#### Marketing to The Physician

In most states, physicians may write prescriptions in three ways: by brand name; by the brand name and an indication that generic substitution is allowed; or by generic name of the drug. Thus, marketing to physicians is extremely important. The patentholder who can convince the physician to prescribe its product has accomplished much toward the long-range goal of gaining and maintaining market share, since the prescriber may completely control brand selection. Patent benefits can be extended if physicians continue brand name prescribing. The lengthy patent period results in association of the drug with the original producer, and this identification persists long after expiration. Drug companies consider this effect a part of the "life cycle" of anticipated economic rewards for the risks of pharmaceutical research (Harrell, 1978). This may be enhanced by legislation prohibiting brand or generic substitution, and by generic names which are more difficult to pronounce and remember than brand names.

Since it is difficult for a physician to acquire extensive knowledge about many drugs, promotion by large pharmaceutical firms is a critical factor in the prescription process. Although the Physicians Desk Reference is the standard prescription reference, it does not provide information about specialized uses, or comparisons between similar drugs (Schwartzman, 1976). Moreover, doctors find it difficult to keep up with new drug knowledge by reading journals. Therefore they rely on major pharmaceutical firms to collect and disseminate new drug information for them. This creates a situation in which they are very receptive to, and influenced by, pharmaceutical promotion.

Since physicians practice many varied specialties, drug firms must carefully target their promotional campaigns. They must coordinate sales representatives, journal advertisements, direct mail offerings, and other promotional elements.

In 1978, 20,000 sales representatives were employed by the pharmaceutical industry at a cost of 60% of total marketing expenditures. They convey information about drugs, and therapeutic alternatives. (Harrell, 1978). Journal advertising, is primarily a supplement to visits

by sales representatives. Direct mail, which allows more elaborate explanations and precise targeting is a smaller, but rapidly growing, element in major firm campaigns. Sample drug distribution has also been a common promotion tool.

The manufacturer of a branded generic promotes to the physician through sales representatives, and journal advertisements which stress high quality and lower cost. This can be persuasive because their product line includes their own original branded drugs, and thus enhances the image of the generics.

A 1978 American Druggist survey in 40 states revealed that only 23% of prescriptions received by responding pharmacists were written generically. This is an indication of the effectiveness of brand quality promotion.

#### Marketing to the Pharmacist

Generic proponents have long claimed that legislation which allowed pharmacists substitution discretion would greatly increase generic use. However, though some form of substitution is allowed in most states, the expected response has not been forthcoming. A 1978 American Druggist survey of pharmacists' attitudes toward substitution revealed that 70% of the respondents supported substitution. However, although 80% of their prescriptions allowed substitution, little more than 20% were actually dispensed generically. When questioned about this discrepancy, 25% believed, that although substitution was allowed, the physician undoubtedly had a good reason for prescribing a particular brand.

Since a pharmacist who substitutes a generic is responsible for providing a drug with equivalent characteristics, manufacturer reputation and liability protection are major considerations in the dispensing decision. According to the survey, the concern most often voiced was over producer reputation; the liability policy offered by the supplier was second. Consequently, branded drugs offer product liability coverage as a purchase incentive.

An additional factor affecting pharmacists' preference for a branded drug is patient consent. A Florida survey (Lambert et.al., 1980) found that consumers who refused generic substitutes had lower income and drug knowledge, and also perceived pharmacists as having less professional training than doctors. Hence, the pharmacist's image becomes an important determinant of consumer choice.

Therefore, we observe that despite existing substitution laws, many physicians continue brand-name prescribing; and pharmacists allowed substitution discretion often dispense brand-name drugs. Both of these behaviors stem from a concern over generic drug quality.

#### The Case of Librium

Roche, the original manufacturer of chlordiazepoxide, continues to maintain price and market share leadership fifteen years after patent expiration, despite competition from numerous generics. In 1960 the introductory price of 10 mg Librium(R) was \$7.00 per hundred. The patent expiration in 1975 resulted in a proliferation of generic offerings. Roche continued to maintain price leadership. By 1979 the price had risen to \$9.93, while the average price of chlordiazepoxide was \$2.51; and Librium(R) still held a 36% market share.

We will examine the time path of generic acceptance, for chlordiazepoxide, utilizing an American Druggist annual Pharmacists Preferences Survey. Respondents are asked to name their drug of choice for prescriptions allowing generic substitution. Chlordiazepoxide was first included in 1977:

	Price of 100 10 mg. caps.	% of Preference
1. Roche	\$8.14	71.0%
2. Smith Kline & French Labs*	4.20	4.8
3. Lederle*	4.49	3.5
4. Zenith	1.56	3.4
5. Parke-Davis*	N.A.	2.9
6. Purepac	2.75	1.8
7. Other (each less than 1%)	-	12.6

\* Indicates a branded generic

We note that Roche's Librium(R) had 71% of pharmacists' preferences, and that either this original drug or branded generics were preferred by over 82% of the respondents. This survey also indicated that concern for quality helps develop a strong association between brand name and manufacturer image. When listing their choice for chlordiazepoxide, 76.4% of the respondents who specified Librium(R) did so by writing "Roche".

In the 1978 survey, pharmacists' preferences for Librium(R) had declined:

	Price of 100 10 mg. caps.	% of Preferences
1. Roche	\$9.45	49.7%
2. Lederle*	4.48	6.1
3. Smith, Kline & French*	3.52	5.7
4. Purepac	2.75	5.2
5. Parke-Davis*	N.A.	4.8
6. Zenith	1.72	3.3
7. Rugby	1.47	3.2
8. Rachelle	2.06	2.0
9. Rexall	N.A.	1.9
10. Spencer Mead	1.30	1.9
11. Other	-	15.3

The 1979 survey revealed a similar trend:

	Price of 100 10 mg. caps.	% of Preferences
1. Roche	\$9.95	37.7%
2. Lederle*	3.80	8.5
3. Smith, Kline & French*	3.03	6.7
4. Rugby	1.87	6.0
5. Purepak	2.78	5.8
6. Parke-Davis*	N.A.	4.3
7. United Research	1.40	2.6
8. Other	-	28.4

These surveys show that many pharmacists still prefer the original brand of chlordiazepoxide, despite availability of generics from many sources. Apparently Roche elected to maintain price leadership after patent expiration, and was able to retain a substantial market share because effective promotion had achieved a quality product image.

#### Policy Recommendations

Relative prices should reflect true quality differences. We recommend policies to ensure that relative risk is accurately portrayed to consumers. One way to achieve

this is to make available information on safety and risks of branded generics and generic products. Since the patient is dependent on the physician's prescription and to some extent on the pharmacist's advice in the purchase process, all three groups would benefit from additional information.

One approach is to require manufacturer labeling of generic products. Another is to improve the process by which a generic product gains market approval. As previously mentioned, considerable legal controversy still exists on this issue. Once a definitive decision on procedures is reached, pharmacists and physicians may develop more confidence in generic drugs. Perhaps more stringent requirements will reduce the number of generics available. However, increased acceptance and available information from professional sources about those generics remaining, would provide a net benefit to consumers.

But such recommendations are insufficient. Without consumer pressure physicians and pharmacists will not be encouraged to increase generic availability. Since an important factor in brand name prescribing and dispensing is the relative ease of recalling brand names. In comparison with generic names, the United States Adopted Names Council has an opportunity to take a more active role in negotiations with manufacturers over the selection of both generic and brand names (Silverman and Lee, 1974).

Revision of state prescription laws must be considered to facilitate physician-pharmacist communication. Some states provide boxes on prescription forms for "dispense as written" or "may substitute generically" to clarify the prescriber's position, and eliminate pharmacist call-backs.

Other policies might include requirements for pharmacists to advise consumers of available substitutes, or the posting of price lists to allow comparison of available equivalents.

One controversial policy, Maximum Allowable Cost (MAC) involves a procedure to force pharmacists to dispense generic drugs when prescriptions are being reimbursed through a government program. The MAC is the lowest cost at which chemically equivalent drugs are generally available, plus a dispensing fee. It is expected to produce downward pressure on prices of multiple-source drugs, by those firms seeking a share of the Medicaid market. However, MAC provisions have raised quality considerations, and have attracted considerable criticism.

Direct mail may be an informational as well as promotional, technique. The Direct Mail/Marketing Association estimates that \$137,000,000 in prescriptions were filled by mail in 1978 (Kirkeby, 1980). Increased promotion through this media may help increase consumer awareness of available generics.

#### Conclusions

The foregoing discussion has concentrated on promotion effectiveness in developing and maintaining quality product image. Consumer perception of lower-priced generics as inferior substitutes for original drugs creates a situation allowing different pricing policies between manufacturers. The recommended policies will help to assure that relative prices reflect true consumer benefit.

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## NEEDED: A RATIONAL AMERICAN MARITIME POLICY FOR TRADE AND FOR DEFENSE

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### Abstract

The U.S. maritime system can promote American growth if it supplements strong international trade practices. What is needed first is a clearly delineated national maritime policy. This paper reviews current maritime policy, and proposes a specific approach that might satisfy both business and national security objectives.

### Introduction

In this, the latter part of the twentieth century, most Americans are only vaguely aware of the existence of the United States merchant marine. Indeed, a majority of American business and academic researchers are not familiar with the essential role and function that the merchant marine plays, not only in the U.S. domestic economy, but in its international commerce. When considering its technology, management, and promotional expertise, as well as its role in world markets, the U.S. should be the world leader in international waterborne commerce. But, the U.S. merchant marine lacks policy cohesiveness due, at least in part, to a lack of support by the nation's business and academic communities for a uniform maritime policy.

### Distribution Strategy

No macromarketing approach to trade between nations can be complete without consideration of distribution, which in turn demands that attention be paid to the vital role played by a nation's merchant marine.

The United States merchant marine has declined relative to the merchant fleets of other countries and clearly the time has arrived for a national maritime policy which addresses such problems in the American business interest.

On an international basis, the U.S. merchant marine has provided the nation with a military shield serving commercial interests in peacetime and providing logistical support to its armed forces in time of war. Yet, competitive disadvantages exist in the maritime industry because the Federal Maritime Commission does not have the authority to require foreign carriers to comply with United States laws. Further, there is a move in Washington that would place U.S. carriers at a further disadvantage by prohibiting their participation in carrier conferences prevalent in other parts of the world (Kanuk 1980A). This movement is compounded by the administration's attempts to apply U.S. antitrust laws to foreign flag carriers.

To evade various federal regulations, many ships owned by American firms are registered in such countries as Liberia, Panama, and Honduras - the so-called "flags of convenience". For example, the flag of convenience permits a vessel under the control of an American company to be built in a Japanese shipyard, at fifty percent of the construction cost of an American shipyard, be registered in Liberia, and be manned by foreign seamen at only one-third the annual payroll of a United States crew. A basic problem facing owners of U.S. - flag fleets is that the construction and operating costs of American and foreign flag vessels is approximately

equal (Rosenberg and Davis 1977).

Since the end of World War II, when it was the leader in terms of tonnage, the U.S. has experienced a steadily-eroding market share, until today the U.S. ships transport only about 5% of U.S. foreign trade, to say nothing of a fractional share of its international cargo (Kanuk 1980B).

In 1916, twenty-six years after the Sherman Antitrust Act was passed, Congress enacted the Shipping Act, which exempted ocean carriers from the antitrust law, allowing them to join with foreign carriers in "rate conferences", or cartels for fixing rates and terms for a particular trade. At the same time, Congress established the Federal Maritime Commission, to protect the public interest through its supervision of the concerted activities of these conferences. The Commission's regulatory role is not confined to policing antitrust exempt activities alone, but through other sections of the Act, provides for the enforcement of fair and equal treatment between carriers and shippers.

### The Jones Act

By 1920, the Congress was ready to act to meet the needs of the U.S. shipping industry. The legislative vehicle of congress was the Merchant Marine Act of 1920. In the Senate, the act was amended to include a strong cabotage law that has become known by the name of its sponsor, Senator Wesley Jones. The Act stated that the maritime policy of the United States was to provide for a merchant marine fleet ". . . sufficient to carry the greater portion of its commerce and serve as a naval or military auxiliary in time of war or national emergency" (Seafarers International Union 1975).

By amending the 1920 Act, Senator Jones was able to achieve his goals which among other things provided that:

- (1) A vessel must be owned by citizens of the United States.
- (2) The vessel must be manned by U.S. officers and seamen.
- (3) Ships must be built in U.S. shipyards (Merchant Marine Act of 1920 1972).

The bill was not exposed to much debate in the Senate and passed with a record vote (Congressional Record 1920).

### The Merchant Marine Act of 1936

The Merchant Marine Act of 1936 authorized subsidies to assist American shipping to compete with the lower costs of foreign built and operated vessels. In 1936 the cost to construct a vessel in an American shipyard was estimated to be about 205% that of foreign shipyards and the wages of United States seamen were approximately fifty percent greater than those of the principle European maritime nations (McDowell and Gibbs 1954). The cost of building restriction is estimated to be in the neighborhood of \$150 million annually (Jantscher 1973). The Maritime Act of 1936 was considered by Congress for fifteen months and thirty-five

drafts were prepared prior to its enactment (Lawrence 1966).

The magnitude of the difference between U.S. and foreign crew costs can be demonstrated by the example of a recent application to the Maritime Administration for an 89,700 dead weight ton tanker to be used in the foreign commerce of the United States. The wages for 26 American seamen were estimated at \$827,500 per year. Wage costs for foreign crew on the same ship would be approximately \$352,000 per year (Moyer and Henderson 1974).

#### Post World War II Developments, 1946-1969

From 1946 until 1969 the Merchant Marine Act of 1936 remained the cornerstone of the nation's maritime policy, the basic trust of the Statute remaining unchanged. In 1965, Secretary of Commerce John T. Connor disturbed the maritime industry when he reversed a subsidy and admonished the industry for its passive acceptance of large wage increases. During that same year, Nicholas Johnson, of the U.S. Maritime Administration commenting on wages said, "Only 28¢ per hour keeps 50,000 seamen from being civil servants" (Monthly Labor Review 1965).

#### The U.S. Merchant Marine Act of 1970

On October 21, 1970, President Richard M. Nixon signed into law the Merchant Marine Act of 1970 (Maritime Commission Annual Report 1971). It extended the granting of construction and operation subsidies to bulk carriers and tankers, ineligible under the 1936 Act. Further, it provided for the computation of an improved index to be used in determining the operational differential (Bowman 1971). Wage costs represented the largest portion of the operating subsidy, comprising approximately 83 percent of the total (U.S. Maritime Administration 1971).

In a Brookings Institution study, Gerald R. Jantscher examined assistance pumped into the American merchant marine and shipbuilding industries. He concluded that the only valid argument for it is based on national security (Jantscher 1975).

It is true that the evidence for subsidies is less than encouraging. In 1936, more than 35% of all U.S. foreign commerce was carried in American ships. In 1980, forty-four years after passage of the 1936 act, and after an expenditure of some \$8 billion in subsidies, American ships are carrying less than 5% of total U.S. oceanborne freight trade, though U.S. foreign commerce has increased fivefold since 1950 (Whitehurst 1980).

No examination of shipping subsidies is complete without consideration of the impact of earned freight rates on a nation's balance of payments and supply of hard foreign currencies. Norway, a nation with few natural resources (prior to the discovery of North Sea oil and gas), supported and protected its merchant marine in a variety of ways. As a result, it developed a large and healthy merchant fleet engaged both in its own trade and largely in third-country trading. The "hidden exports", represented by earned freight rates, more than offset what would otherwise have been a balance of payments deficit (Williams 1978). It has been suggested that a principle reason for Soviet maritime development has been to earn hard currencies (Ackley 1976).

#### Effective United States Control

Since a major reason this country supports a merchant marine is its potential importance as a military auxiliary, why has there not been concern about the dependability of ships serving under "flags of convenience"?

The primary reason is that such ships operate under an Effective United States Control (EUSC) Program. The program identifies vessels owned by American interests, but registered under the flags of Panama, Liberia or Honduras which are under contract to the United States in the event of a national emergency. At the end of 1976, there was a total of 677 foreign flag ships owned by American companies (Kilgour 1977).

The EUSC program assumes that the foreign registered ships of American companies are under their control, and that those companies are prepared to exercise that control in the interests of the United States. However, on at least several occasions during recent years these assumptions have been suspect.

At one point during the 1973 Arab-Israeli war, in response to Soviet threats, President Nixon declared a military alert. King Faisal, of Saudi Arabia, responded with a demand that the American owned company, ARAMCO, that had numerous ships flying foreign flags, not supply United States military forces in Europe with Saudi oil. The American companies complied with the King's wishes, though supplying American military needs from other sources. At the same time, the Liberian president issued an executive order which prohibited all vessels of Liberian register from delivering war supplies to the Middle East. The incidents raise important questions about the dependability of the Effective United States Control Program (Kilgour 1977). The program has its defenders, however; see, for example Church (1980). In any event, for the carriage of military equipment and supplies, the question is really moot, since almost all of the EUSC ships are large bulk carriers or tankers (Chase 1976).

The necessity of an adequate merchant marine for purposes of defense becomes clear when one reflects that the United States, its NATO allies, and Japan are all maritime countries, utterly dependent on oceanborne trade, as well as requiring ships for purely military purposes. Chase (1976) noted that, during the Vietnam war, more than 95 percent of all war material was shipped by water. During the seven day Yom Kippur War of 1973, more than 75 percent of U.S.-supplied war material went by sea. Chase also identifies five distinct roles or missions which must be played by the U.S. merchant marine during wartime. Military sealift; carriage of strategic material; direct support of military operations; auxiliary combatants (conversion of merchant ships to limited-role warships); and support of foreign policy. No one professes that the present U.S. merchant marine is adequate in size or composition for the performance of these missions. Nor has anyone suggested a solution to this problem which is either more effective or more economical (in terms of public outlays) than subsidization.

#### The Conference System

Most U.S. carriers belong to shipping conferences that operate under supervised antitrust immunity to set rates and sailing schedules and to pool cargoes. Such conferences are not creations of the 1916 act, but are an outgrowth of the fierce rate competition resulting from expansion in available steamship tonnage during the half-century 1850-1900 (Marx 1953). The first of these cartels was formed in August of 1875 by British lines engaged in the Great Britain--Calcutta trade (Ferguson et al 1961).

In 1976, the Justice Department began to examine the conference system. The Antitrust Division began to question whether the conference system is necessary to prevent abuse of monopoly power or whether competition



governed by antitrust laws could give the same protection. Under the study was the question of whether conferences are responsible for stable rates and services, or for higher rates and over-capacity. Antitrust specialists are concerned that increasing antitrust regulation might prejudice the position of U.S. flag lines in relation to their foreign competitors because of difficulties of enforcing antitrust laws against overseas firms (Farrell 1977).

In 1978, Richard J. Daschbach, Chairman of the Federal Maritime Commission, indicated there is an urgent need for revisions in U.S. shipping laws to deal with the changing dynamics of world trade (Daschbach 1978). The conference system has provided a dual rate contract system which offers shippers up to a 15 percent discount from listed rates when they agree to ship exclusively via conference carriers on a specific trade route. Additionally, on every trade route there are non-conference carriers that offer lower rates in order to attract cargo. Further, several years ago carriers of Eastern Bloc nations, which are government controlled vessels, entered foreign trade and began to undercut both conference lines and independents. Some U.S. shippers began to give much of their business to these third-flag carriers.

The recent penetration of state-controlled carriers, particularly Soviet, is threatening to U.S. ocean commerce. Their potential growth is awesome with such advantages as heavy government subsidization, low operating costs, and the ability to set rates without market restraints. This trend, coupled with political rather than commercial motivation, is an example of how political considerations have gained importance in the world marketplace (Daschbach, 1978).

To fill their empty cargo space, a number of conference carriers offer illegal rebates to shippers. While the Federal Maritime Commission has regulatory power over foreign lines calling at U.S. ports, due to blocking statutes of foreign governments, it has been able to enforce violations of conference agreements only against U.S. carriers. Thus, the conference carriers that suffer under the restraint of U.S. shipping laws have been American, contributing further to a weakened U.S. Merchant Marine.

#### U.S. Maritime Confusion Concerns Trade Partners

The rest of the World is ready to launch a new maritime policy advocated by the United Nations Conference on Trade and Development. The terms advocated include a cargo sharing system based on a forty percent share of shipping for the host country, forty percent for the trading partner and twenty percent for third-flag carriers.

The major European shipping companies are anxious to see the United States achieve a positive maritime policy. One executive of a Norwegian steamship company commented on the unfortunate rivalry between the U.S. Department of Justice and the Federal Maritime Commission. He strongly approved of the Administration's authorization of U.S. shipper councils, but warned that they would be unable to accomplish their tasks without freedom from burdensome regulatory procedures (Handling and Shipping Management 1980).

#### Omnibus Maritime Regulatory Reform, Revitalization and Reorganization Act

In July, 1979, the Carter Administration's policy statement was issued. It proposed specific amendments to the Shipping Act of 1916 which would reestablish the primacy of the Federal Maritime Commission in regula-

ting ocean shipping; redefine the limits of the antitrust immunity available to the conferences under Section 15 of the Act; and authorize antitrust exemption for Shippers Councils.

Representative John Murphy (New York) introduced an "omnibus" maritime bill to legalize closed carrier ratemaking conferences and permit shippers conferences, and to establish a goal of 40 percent of U.S. foreign trade in American flag vessels. On the other side of the Capitol, Senator Daniel K. Inouye (Hawaii) introduced eight maritime bills.

In January, 1980, the Transportation Association of America urged maritime regulatory reform. The TAA told the Merchant Marine subcommittee of the House of Representatives that the primary causes of the decline of the U.S. flag liner fleet are the many American laws, regulations, and policies that discriminate against U.S. flag carriers. While Congress has intended to provide exemptions to the antitrust laws by enactment of Section 15 of the Shipping Act of 1916, the protection has been eroded by attacks by the Anti-Trust Division of the Department of Justice (Distribution 1980).

On February 28, 1980, James T. Crowley, Senior Vice President, Moore-McCormick Lines, said that the goal of regulatory reform should be the reduction of governmental barriers. He stated that the reform must reaffirm the supremacy of the Shipping Act of 1916 over antitrust laws. Mr. Crowley added that until the Administration and the Congress, together with the Federal bureaucracies, are governed by a national policy which recognizes that the privately owned U.S. Flag merchant marine has a purpose, value, and status within the whole of the nation's perceptions of strength in peacetime trades and wartime needs, there is little hope that the American shipping industry can survive as a stable industry (Crowley 1980).

The latest version of the Omnibus Maritime Reform Bill has provisions that are under attack by the U.S. shipbuilding unions and the National Maritime Council (NMC). The shipbuilders and unions are complaining about provisions in the bill that would allow ships built in foreign countries, for U.S. lines, to receive a U.S. subsidy. On the other hand, the council objects to provisions that allow for terminating or reducing construction subsidies, and to new definitions of wage costs that would change the amount a company would get in operating subsidies (Distribution 1980).

#### Is Unregulated Competition the Answer?

Ironically, the Antitrust Division now proposes that the shipping industry be deregulated and the Conference System abolished. It does not appear to recognize that foreign government controlled lines have the ability to reduce prices below cost and to maintain such prices until competition is forced out of the trade. Once in control of foreign trade, it seems likely that third-flag carriers would increase their prices dramatically, as OPEC nations have increased the price of oil.

In 1978, Richard J. Daschbach noted that the Congress is aware of the unique economic structure of overseas shipping. It realized that a time when America faces the growing threat of State-controlled fleets in its foreign commerce and a widening trade deficit in its foreign markets, application of U.S. antitrust laws to the maritime industry would be disastrous. Chairman Daschbach added that fragmentation of national policy has been evident in America's dealings with foreign governments, as well as with technological developments in the nation's ocean commerce (Daschbach 1978). Thomas F. Moakley, Vice Chairman, U.S. Maritime Commission,

states that the United States must develop policies that ensure that American flag carriers are not deprived of their fair share of markets (Barnberger 1978).

The philosophy of free competition has long been considered the optimal model for the United States economy. Yet, conditions that currently prevail in U.S. ocean commerce do not appear favorable to a climate of unregulated competition. Foreign carriers not only predominate on the major trade routes of American commerce, but often appear to be motivated by political rather than economic factors. International trade requires an interface with a wide variety of economic, cultural, and political systems which do not subscribe to American notions of value of free competition.

The current trend by the maritime policy makers in other nations seems to indicate a strengthening of conference system. While there are people in government who advocate the deregulation of ocean transportation, the United States does not appear to be in a position to disregard these realities.

#### Conclusion

A review of the maritime policy of the United States reveals that a firm policy has failed to evolve. Basically, there is agreement that the nation, in its efforts to preserve peace, must guard against its vulnerability in time of war. The U.S. merchant marine provides logistical support to America's armed forces during military conflicts.

However, there are numerous differing views. Shipbuilders and ship building unions want vessels to be constructed in U.S. shipyards. Unions want the vessels to be manned by American seamen. The managements of ocean shipping firms request subsidies, to meet lower cost foreign competition. The federal government is under pressure to increase subsidies, while striving to maintain control of the national budget.

American shippers and importers of merchandise and commodities, to be competitive, attempt to obtain the lowest possible shipping rates. They utilize the services of American and foreign ships that are members of shipping conferences, and those of independent ocean carriers. Increasingly, they are shipping by third-flag carriers controlled by Eastern Bloc nations, disregarding possible economic consequences.

It is recommended that Congress develop a maritime policy based on recognition of existing conditions:

- (1) The U.S. Maritime fleet is a part of the national defense fleet of the nation.
- (2) Flag of convenience vessels have proven to be of questionable support in the event of a national emergency.
- (3) It is a general practice in international shipping for foreign carriers to fix rates, set sailing schedules and pool cargoes.
- (4) Other countries, including the Soviet Bloc, are subsidizing the operations of their fleets.
- (5) Many U.S. shippers, in order to meet competition, will book shipments on vessels with the lowest freight rates.

American policy makers might take the following action:

- (1) Subsidize the construction of vessels built in

American shipyards; subsidize the pay of American seamen.

- (2) Prohibit the registration by American companies of their vessels under flags of convenience.
- (3) Permit American shipping companies to participate, in nonregulated fashion, in international shipping conferences.
- (4) Require American manufacturing and distribution firms to ship and receive at least forty percent of their international tonnage by vessels of American registry.

The United States maritime policy requires cohesive development and unification. American agricultural, commodity, and manufacturing firms must be given the opportunity to use an economical, competitive, national maritime fleet. And, the maritime industry must be enabled to support the international transportation and defense needs of the nation.

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Abstract

Commonly used models for time series fitting and forecasting are not well suited for accommodating a sudden shift in the behavior of a series. Using sales data for a particular firm, this paper illustrates the intervention analysis model technique of fitting and describing the effect of an exogenous event on the series of interest.

Introduction

Marketing researchers have expended much effort in developing models for describing and forecasting product sales. The model chosen to describe the sales pattern may be motivated by the objectives of the researcher. For instance, if the interest is solely in obtaining accurate short term forecasts of future sales, a univariate time series method such as exponential smoothing or Box-Jenkins (B-J) may be employed. Univariate methods, particularly B-J, have been shown in a variety of settings to be able to forecast as well as more complicated structural models (Newbold and Granger (1973) for example). Multivariate model approaches are likely to be used when, instead of or in addition to obtaining forecasts, there is interest in the effects of proposed independent variable(s) on the sales variable. Such approaches include regression and distributed lag models (reviewed by Clarke, 1976), transfer function analysis (Helmer and Johansson, 1977), causality detection (Caines et al, 1977), and feedback approaches (Mahajan et al, 1980).

This study will examine a newly-developed method for modeling and forecasting product sales when an exogenous event or series of events occur which change, at least temporarily, the level of the sales series. The approach is univariate in that the only data set utilized is the sales series, but the model can accommodate the effect of a sudden change in the environment.

The models we build, whatever their application, are necessarily simplifications -- parsimonious representations of an actual process. One example occurs when we model data which are gathered over time. In these situations there is usually the implicit assumption that the process and therefore the variable coefficients are stable; regression and distributed lag models illustrate this point. Mahajan et al (1980) note that market conditions (consumer taste, economic well-being, competitor actions, stage of product life cycle, etc.) do change over time, and that the stability assumption is unlikely to hold as we consider data spanning long intervals of time. To deal with suspected changing estimates for the advertising coefficient these authors offer a bivariate method with time-varying parameter estimates to model the advertising-sales relationship. The question of model form stability has also arisen in univariate B-J studies. For example Dalrymple (1978) found instability over time in several of his models, and found it necessary to change model form from time to time. McKeown and Lorek (1978) found it advantageous, in terms of forecast accuracy, to update model parameter estimates as new observations became available and to periodically permit the model form to be re-identified.

In this study, a univariate technique called intervention analysis (Box and Tiao, 1975) is demonstrated on a time

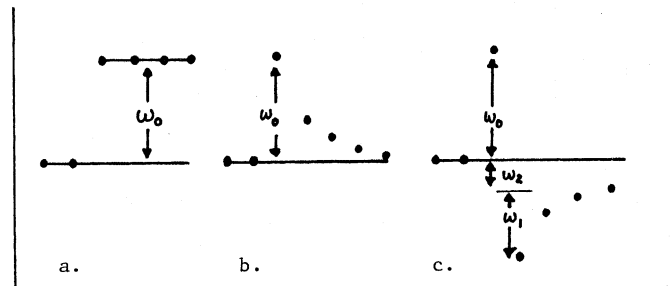
series of product sales. The intervention approach is a method of dealing with a change in underlying conditions, but is oriented toward major and time-definable events as opposed to more subtle changes which may unfold slowly. Intervention analysis will be shown to be a method which can offer the researcher potential benefits: an understanding and description of how the marketplace responds to the intervention(s), and improved forecast accuracy.

Theory

Intervention analysis can be viewed as a special case of ordinary univariate B-J modeling. To apply the method, the researcher identifies and models the appropriate univariate (noise) model which applies up to the point of the intervention, and then utilizes special parameters (omega and delta terms) to describe the effects of the intervention. The identified noise model continues to apply during and after the intervention; the intervention parameters serve to model the incremental effect of the intervention beyond the behavior which is due to the noise model. Just as a very few autoregressive and moving average parameters are capable of describing a wide variety of ordinary univariate models, it is likewise the case that most interventions can be described with very few delta and omega parameters.

Shown in **Figure 1** are representations of a few different possible kinds of interventions. Figure 1a shows the simplest sort of intervention, a "step," or change in level, which is modeled by the omega parameter. Omega can be either positive or negative.

FIGURE 1. ILLUSTRATIVE INTERVENTION MODELS



**Figure 1b** shows a "pulse" which decays exponentially over time. The omega parameter ( $\omega_0$ ) is used to measure the one-period change in the level of the series; a delta parameter (roughly similar to the univariate model's autoregressive order 1 term) is used to model the decay rate. The omega term in this example could perhaps represent the effect of a one-period special advertising promotion, with some carryover or residual effects. If no residual effects were present, the series would immediately revert to its pre-intervention level and no delta parameter would be needed. It should be noted that intervention parameters can have a "delay" factor; for example an intervention which occurs in time period  $t$  might not have an effect until time period  $t+1$ .

**Figure 1c** illustrates a positive pulse ( $\omega_0$ ) followed by a negative pulse and step ( $\omega_1$  and  $\omega_2$  respectively) one period later. The negative pulse declines exponentially to a new level for the series at  $\omega_2$ . Conceivably this

sort of pattern could describe sales for a product when a price increase is announced in advance. This model would have four intervention parameters - three omegas and one delta.

The above examples may suggest that it is relatively easy to model an intervention by inspection, but this is not necessarily the case. This is because the effects of an intervention (if they exist) may be partly hidden by one or more of the following: trend, seasonal patterns, autocorrelation in the series, and random noise. The illustrative figures above presumed the absence of these factors.

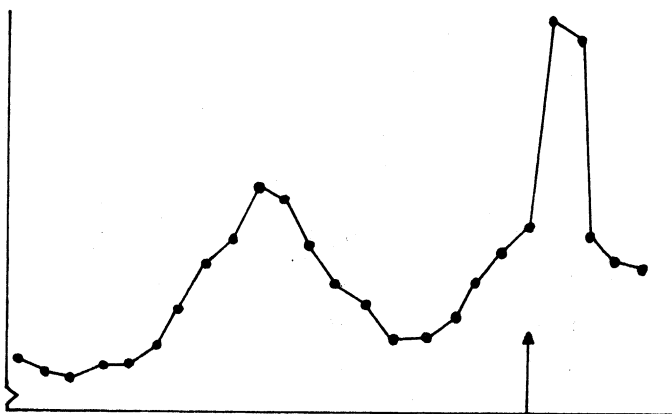
Intervention modeling involves the same procedures as univariate B-J modeling: identification, estimation, and diagnostic checking. In identifying the intervention model we keep in mind that the effect can be brief, intermittent, or permanent, and that the effect can be observed immediately or after one or more time periods. The parameter estimation step of intervention analysis has the potential to isolate the effect of the intervention from other types of autocorrelation mentioned above, and thus permit inferences about the magnitude, duration, statistical significance, etc., of the effect. An estimated model which passes the diagnostic checking step may then be used for forecasting. The reader interested in a deeper discussion of the model and the estimation method is referred to Box and Tiao (1975).

#### Application

#### Data

The data used in this study are monthly sales of a beverage within a sales region for a particular firm. Figure 2 below shows the 24 most recent observations. Not shown but used in all models developed are the previous 38 observations; thus a total of over six years' worth of data were available. The data exhibit a very strong seasonal pattern and a modest overall upward trend. The firm's market share is about ten percent. The sales units used herein are actual sales divided by a constant to help disguise the data.

FIGURE 2. SALES PATTERN - RECENT PAST



#### Intervention

Near the end of the 58th period (indicated by an arrow in Figure 2) a major competitor's production was interrupted by a strike, and the brand became unavailable after store inventories were depleted. Production and delivery of the competing brand resumed late in the 60th period.

#### Modeling

It appears as if the intervention could be modeled as two pulses - one in period 59, another in period 60. The pulse in period 59 would seem to be the larger one since the seasonal peak would have occurred in period 60 had the past pattern of sales repeated itself.

The first step in intervention modeling is to develop a univariate B-J model for the data up to the point of the intervention. Since the competitor's product became generally unavailable to the consumer at the beginning of the 59th period, 58 data points were used to construct the univariate (noise) model. It was then found that a  $(011)(011)_{12}$  univariate model best described the noise series.

The full intervention model (noise plus two omega parameters) was then estimated. The algorithm requires starting values for the omegas as well as for the regular univariate terms. Final parameter values are shown in Table I.

TABLE I

FINAL PARAMETER VALUES - MODEL 1		
Model - Term	Value	Value/Std. Err.
Noise Model		
Moving Average 1	.632	3.51
Moving Average 12	.696	3.99
Intervention		
Omega 0 (period 59)	474	6.71
Omega 1 (period 60)	-291	-3.80

The negative sign on Omega 1 is an artifact of the model; it does indicate a positive pulse. This model did pass the usual diagnostic tests on the residuals.

This model quantifies the effect of the strike, describing the intervention as having resulted in a sales increase of 474 in period 59 and an increase of 291 in period 60, both values being highly significant. This model form implies a return to "normal" conditions in period 61; however this model's forecast for period 61 proved to be much too high. This result led to speculation that perhaps the return of the brand which had been on strike should be viewed as a second intervention in the marketplace. Accordingly, two additional intervention models were postulated: Model 2 was the same as Model 1, but with a negative pulse in period 61 to describe the return of the competing brand as a one-period phenomenon; and Model 3, same as Model 2, but with a delta parameter to decay the negative pulse over time. All parameters proved to be significant for both Models 2 and 3, thus indicating the need for the delta operator. Table II below shows the final parameter estimates for Model 3.

TABLE II

FINAL PARAMETER VALUES - MODEL 3		
Model - Term	Value	Value/Std. Err.
Noise Model		
Moving Average 1	.611	3.48
Moving Average 12	.677	3.91
Intervention 1		
Omega 0 (period 59)	471	6.70
Omega 1 (period 60)	-292	-3.77
Intervention 2		
Omega 0 (period 61)	-181	-2.49
Delta	.655	2.11

## Discussion and Summary

No forecasting model typically employed by a firm would anticipate the sales after the strike at the competing firm - these periods of high sales were related to events outside the firm's control. One of the unique features and advantages of intervention analysis is in being able to describe the strike effects by removing trend, seasonality, and autocorrelation from the data in order to quantify these two "pulses."

The negative pulse in period 61 and the need to postulate a second intervention was interesting and unanticipated. It is not fully understood why sales were depressed in this and subsequent periods; it may be due to competitor advertising and/or some phenomenon related to brand switching.

In the four periods beyond those shown on [Figure 1](#) models 2 and 3 forecast much better than Model 1; Model 3 with its decay factor was also more accurate than Model 2 in all four periods; after this time Models 2 and 3 became virtually identical.

Intervention models with just one pulse or series of pulses will forecast about the same as a univariate B-J model in the post-intervention periods; intervention models with a step (change in level) response or with a delta operator in them are likely to out-perform any forecasting techniques which do not recognize interventions as explicitly as this method does.

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(Research support for this study was provided by the School of Business, University of Louisville.)



POISSON FORECASTING MODELS: AN INTRODUCTION

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Abstract

This paper presents the use of the Poisson probability distribution for forecasting discrete time series. The properties of the weights using the Poisson distribution are discussed. These weights provide alternatives, not attainable by exponential smoothing models. As an introduction to Poisson smoothing process, a constant and linear trend correction models are presented. For some of the time series tests, the Poisson forecasting models show slightly improved forecast accuracies compared to exponential forecasting models.

Introduction

The literature on business forecasting models are numerous and varied in nature. The most widely used approaches in the area of forecasting can be classified into exponential, Box-Jenkins, and adaptive forecasting methods [1, 2]. Both exponential [3, 4] and Box-Jenkins approaches are well established as sound techniques for forecasting discrete time series. A detailed description of the model identification, model estimation, diagnostic checking, and forecasting can be found in the text written by Box and Jenkins. In this paper a comparison between exponential and Poisson models are presented, while the comparison between Poisson and Box-Jenkins models is in order for future research.

The Constant Exponential and Poisson Forecasting Models

The basic single parameter exponential smoothing process is defined as follows:

$$\hat{Y}(t) = \alpha Y(t) + (1-\alpha)\hat{Y}(t-1) \tag{1}$$

where,  $Y(t)$  = actual time series value for period  $t$

$\hat{Y}(t)$  = smoothed time series value for period  $t$  (used as the forecast for period  $t + 1$ )

$\alpha$  = smoothing parameter  $0 \leq \alpha \leq 1$ .

The above model provides the following weighting scheme for  $t$  periods of historical time series data:

$$Y(t) = w_t Y(t) + w_{t-1} Y(t-1) + w_{t-2} Y(t-2) + \dots + w_1 Y(1) \tag{2}$$

where

$$w_i = \alpha(1-\alpha)^{t-i} \quad i = 1, 2, \dots, t \tag{3}$$

and

$$\sum_{i=1}^t w_i = 1 - (1-\alpha)^t \tag{4}$$

where

$(1-\alpha)^t$  approaches zero as  $t$  gets large.

This paper introduces a Poisson smoothing model which, while maintaining most of the advantages of the

Exponential Smoothing model, provides a new range of weighting scheme alternatives for the  $t$  periods of time series data. The Poisson Smoothing process is offered as an alternative to, rather than a replacement for, exponential smoothing.

The basic single parameter Poisson Smoothing process is defined as follows:

$$\hat{Y}(t) = e^{-\lambda} \left[ Y(t) + \lambda Y(t-1) + \frac{\lambda^2}{2!} Y(t-2) + \dots + \frac{\lambda^{(t-1)}}{(t-1)!} Y(1) \right] \tag{5}$$

where  $Y(t)$  and  $\hat{Y}(t)$  are defined above.

Given a discrete time series of  $t$  periods, the Poisson Smoothing model defines the weights for each period as follows:

$$w_i = \frac{e^{-\lambda} \lambda^{(t-i)}}{(t-i)!} \quad i = 1, 2, \dots, t \tag{6}$$

where  $\lambda$  = Smoothing parameter,  $\lambda > 0$ .

Since these weights are recognizable as the probabilities of the Poisson distribution [5], the forecasting model is termed a Poisson Smoothing process.

Note that in the above model,  $e^{-\lambda}$  is the weight applied to the most recent time series value. The corresponding exponential smoothing model weight for the same time series value is  $\alpha$ , which in most practical forecasting problems is .05 or greater. If we restrict our Poisson Smoothing parameter  $\lambda$  to cases where  $e^{-\lambda}$  is also .05 or greater, it is found that the sum of the Poisson weights for the most recent time series observations rapidly approaches one. This has practical significance in that the older time series data carries essentially negligible weights and can be removed from the model without significantly affecting the smoothed time series value  $\hat{Y}(t)$ . Thus, while the Poisson weights of equation [6] can be defined for any  $t = 1, 2, 3, \dots$ , a  $t$  of 10 accounts for at least .9997 of the total weighting of the past data. In fact, as  $t$  becomes large, it is only necessary to consider the weights for the most recent  $k$  periods ( $k < t$ ).

The Exponential Forecasting Model With Linear Trend Correction

Let a time series have a constant linear trend  $b$ . Applying the constant exponential smoothing model (equation [1]) to the time series provides the following smoothed value expression:

$$\hat{Y}(t) = \alpha V + \alpha(1-\alpha)(V-b) + \alpha(1-\alpha)^2(V-2b) + \dots + \alpha(1-\alpha)^n(V-nb) + \dots \tag{7}$$

where

$$Y(t) = V$$

$$Y(t-1) = Y(t) - b = V - b$$

$$Y(t-2) = Y(t-1) - b = V - 2b$$

etc.

Therefore,

$$\begin{aligned} \hat{Y}(t) &= \alpha V [1 + (1-\alpha) + (1-\alpha)^2 + \dots] \\ &\quad - \alpha(1-\alpha)b [1 + 2(1-\alpha) + 3(1-\alpha)^2 + \dots] \\ &\quad + n(1-\alpha)^{n-1} + \dots \end{aligned} \quad (8)$$

$$\begin{aligned} &= \alpha V \frac{1}{\alpha} - \alpha(1-\alpha)b [1 + (1-\alpha) + (1-\alpha)^2 + \dots] \\ &\quad + [(1-\alpha) + (1-\alpha)^2 + \dots] + \dots \\ &= \alpha V \frac{1}{\alpha} - \alpha(1-\alpha)b \left[ \frac{1}{\alpha} + \frac{(1-\alpha)}{\alpha} + \frac{(1-\alpha)^2}{\alpha} + \dots \right] \\ &= \alpha V \frac{1}{\alpha} - \alpha(1-\alpha)b \left[ \frac{1 + (1-\alpha) + (1-\alpha)^2 + \dots}{\alpha} \right] \\ &= V - \frac{(1-\alpha)}{\alpha} b \end{aligned} \quad (9)$$

Hence the Constant Exponential model lags the linear trend or ramp series by  $\frac{(1-\alpha)}{\alpha} b$ . The exponential smoothed estimate of the linear trend can be obtained as follows:

$$\begin{aligned} \hat{b}(t) &= \alpha b(t) + \alpha(1-\alpha)b(t-1) + \dots \\ &\quad + \alpha(1-\alpha)^n b(t-n) + \dots \end{aligned} \quad (10)$$

where

$$b(t) = \hat{Y}(t) - \hat{Y}(t-1) \quad (11)$$

Note that in equation [10] the trend estimate in period  $t$  is defined as the difference between the two most recent smoothed estimates of the series.

Therefore, the smoothed value of the time series including the linear trend correction is best given by  $F(t)$  where

$$F(t) = \hat{Y}(t) + \frac{(1-\alpha)}{\alpha} \hat{b}(t) \quad (12)$$

The forecast for  $\ell$  periods in the future (assuming no seasonality) is given by:

$$F(t+\ell) = F(t) + \ell \hat{b}(t). \quad (13)$$

#### The Poisson Forecasting Model With Linear Trend Correction

Suppose we have a time series with a constant linear trend  $b$ . Applying the constant complete Poisson Smoothing model (equation (5)) to the time series provides the following smoothed value expression:

$$\begin{aligned} Y(t) &= e^{-\lambda} [V + \lambda(V-b) + \frac{\lambda^2}{2!}(V-2b) + \dots \\ &\quad + \frac{\lambda^n}{n!}(V-nb) + \dots] \end{aligned} \quad (14)$$

where

$$Y(t) = V$$

$$Y(t-1) = Y(t) - b = V - b$$

$$Y(t-2) = Y(t-1) - b = V - 2b$$

etc.

Therefore,

$$\begin{aligned} \hat{Y}(t) &= e^{-\lambda} V [1 + \lambda + \frac{\lambda^2}{2!} + \dots + \frac{\lambda^n}{n!} + \dots] \\ &\quad - e^{-\lambda} b [\lambda + \frac{2\lambda^2}{2!} + \frac{n\lambda^n}{n!} + \dots] \\ &= e^{-\lambda} \cdot V \cdot e^{\lambda} - e^{-\lambda} b [\lambda + \lambda + \dots \\ &\quad + \frac{\lambda^{n-1}}{(n-1)!} + \dots] \end{aligned} \quad (15)$$

$$\text{Since } e^{\lambda} = [1 + \lambda + \frac{\lambda^2}{2!} + \dots + \frac{\lambda^{n-1}}{(n-1)!} + \frac{\lambda^n}{n!} + \dots]$$

Therefore,

$$\hat{Y}(t) = V - \lambda b \quad (16)$$

Hence the constant Poisson smoothing model lags the linear trend or ramp time series by approximately  $\lambda b$ . The Poisson smoothed estimate of the linear trend can be obtained as follows:

$$\begin{aligned} \hat{b}(t) &= e^{-\lambda} [b(t) + \lambda b(t-1) + \frac{\lambda^2}{2!} b(t-2) + \dots \\ &\quad + \frac{\lambda^k}{k!} b(t-k)] \end{aligned} \quad (17)$$

where

$$b(t) = \hat{Y}(t) - \hat{Y}(t-1). \quad (18)$$

Note that in equation (17) we are applying Poisson smoothing to our most recent  $k+1$  trend estimates where the trend estimate in period  $t$  is defined as the difference between the two most recent smoothed estimates of the series.

Therefore, the smoothed value of the time series including the linear trend correction is best given by  $F(t)$  where

$$F(t) = \hat{Y}(t) + \lambda \hat{b}(t). \quad (19)$$

The forecast for  $\ell$  periods in the future (assuming no seasonality) is given by:

$$F(t+\ell) = F(t) + \ell \lambda \hat{b}(t) \quad (20)$$

#### Poisson And Exponential Forecasting Models: A Comparison

The Poisson and exponential smoothing models are similar in that they are both single parameter models that provide weighting schemes for the previous time series data. A trial-and-error procedure for finding the best smoothing parameter  $\lambda$  for the Poisson process would be very similar to the procedure used to find the best smoothing parameter  $\alpha$  for the exponential smoothing model.

With regards to the data handling requirements, the exponential smoothing model is superior. The Poisson

model may require as many as seven more data values than the exponential smoothing model. The data handling and storage disadvantages of the Poisson model may be compensated for by the fact that this model enables a new variety of weighting scheme alternatives for the past data. In particular, the exponential model is limited to cases where the more recent data always receives more weight. While the Poisson model can also exhibit this behavior, it offers some additional flexibility in that certain values of  $\lambda$  will allow the older data to receive higher weights than the most recent data. For example, a  $\lambda$  of 1.2 with  $e^{-\lambda}$  equal to .3, provides a weight of .36 for data two periods old and a weight of .30 for the most recent observation. It seems reasonable and conceivable that the weighting scheme flexibility of the Poisson model might improve the overall forecasting accuracy for some specific time series. Examples of the three possible Poisson weighting schemes are shown in Figure 1.

The overall value of the Poisson model will however have to be measured in terms of forecasting accuracy. In other words, is there empirical evidence that in some cases the Poisson weighting scheme provides smaller forecasting errors than the exponential smoothing model? To obtain an empirical comparison of the two smoothing processes, we have selected in the first data set three fairly divergent time series: industrial production, stock prices, and unemployment rates. These series, which consist of monthly values over a ten-year period, are shown in Figure 2.

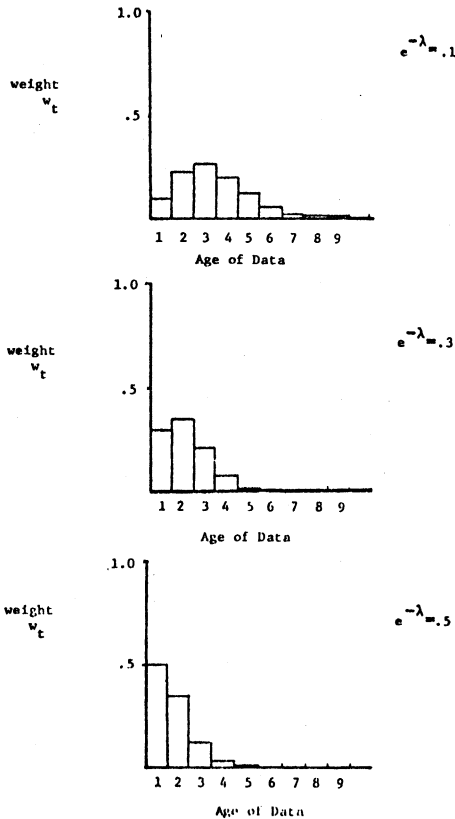


Figure 1. Poisson Weighting Schemes with  $e^{-\lambda}$  Values of .1, .3, and .5.

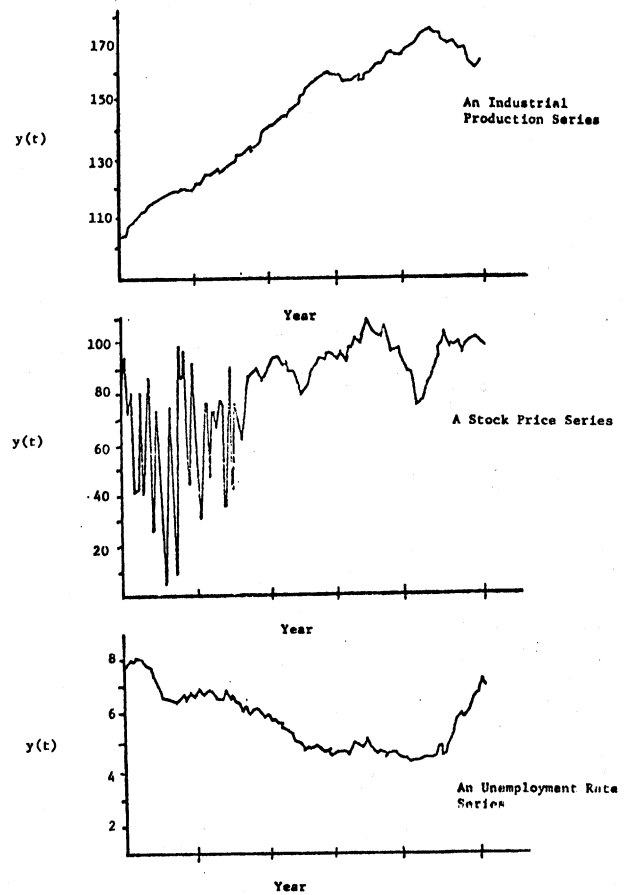


Figure 2. Time Series Used to Compare the Exponential and Poisson Smoothing Models

The forecasting accuracy, which is evaluated for each of three future periods, is measured in terms of the mean square error (MSE). The mean square error is defined as follows:

$$MSE_{\lambda} = \frac{1}{T} \sum_{t=1}^T (y(t+l) - F(t+l))^2 \quad \text{for } l = 1, 2, \text{ and } 3 \quad (21)$$

where

$T$  = total number of time series values.

For both the Poisson and exponential smoothing constant models,  $F(t+l) = \hat{y}(t)$  for all  $l$ .

All time series were forecasted using the exponential constant and linear trend models and the Poisson constant and linear trend models. Each forecasting model was evaluated with nineteen different smoothing parameters. For the exponential smoothing models we used  $\alpha = .05, .10, .15, \dots, .90, \text{ and } .95$ . For the Poisson smoothing models we used values of  $\lambda$  such that  $e^{-\lambda} = .05, .10, .15, \dots, .90, \text{ and } .95$ . In this way, the weight applied to the most current observation  $y(t)$  is equivalent between the two models and therefore serves as a basis for comparing the two models.

The best exponential and Poisson forecasting models (i.e., the best  $\alpha$  and  $\lambda$ ) were identified for each time

series. The  $\alpha$  and  $\lambda$  values which yield the smallest MSE are defined to be the "best"  $\alpha$  and  $\lambda$  values. The forecasting accuracies for constant exponential and Poisson models are summarized in Table 1.

TABLE 1  
MEAN SQUARE ERRORS OF THE BEST FORECASTING MODELS FOR THREE TIME SERIES

Time Series	Best Model	Mean Square Error
Industrial Production	Exponential Constant ( $\alpha = .60$ )	1.08
	Poisson Constant ( $e^{-\lambda} = .65$ )	1.09
Stock Prices	Exponential Constant ( $\alpha = .35$ )	181.69
	Poisson Constant ( $e^{-\lambda} = .10$ )	179.97
Unemployment Rate	Exponential Constant ( $\alpha = .35$ )	.05
	Poisson Constant ( $e^{-\lambda} = .35$ )	.05

The industrial production series favor the exponential constant model; the stock prices series shows the Poisson constant model providing the better forecasts; the unemployment rate series shows identical results for the forecasting models. Overall, based on this rather limited empirical comparison, the exponential and Poisson smoothing models provide quite similar forecasting results.

Table 2 summarizes the results for the exponential and Poisson linear trend models for the data set. The industrial production series favor the Poisson trend correction models for all the three time periods. Except for the first period, the stock prices series favor the Poisson trend correction model. In the case of unemployment rate series, both models indicate the same forecasting accuracies.

TABLE 2

MEAN SQUARE ERRORS FOR THE BEST FORECASTING MODELS FOR THE THREE TIME SERIES

Time Series	Best Model	Mean Square Error		
		Period 1	Period 2	Period 3
Industrial Production	Exponential Trend ( $\alpha_1 = .55, \alpha_2 = .75$ )	1.06	3.15	5.77
	Poisson Trend ( $\lambda_1 = .36, \lambda_2 = .92$ )	1.03	2.91	5.25
Stock Prices	Exponential Trend ( $\alpha_1 = .25, \alpha_2 = .10$ )	196.68	221.35	708.29
	Poisson Trend ( $\lambda_1 = 1.39, \lambda_2 = 2.30$ )	202.04	208.29	198.24
Unemployment Rate	Exponential Trend ( $\alpha_1 = .55, \alpha_2 = .10$ )	.03	.04	.05
	Poisson Trend ( $\lambda_1 = .60, \lambda_2 = 2.30$ )	.03	.04	.05

### Conclusions

This article introduces the smoothing process based upon the Poisson probability distribution. The results of the Poisson forecasting models are compared with those of the exponential forecasting models. Even though the single parameter Poisson smoothing model requires additional data storage, it allows past data

weighting scheme alternatives that may in some cases yield better forecasting accuracies than those observed by similar exponential smoothing models. However, the forecasts using this model cannot be updated recursively. This disadvantage is minimized due to the improved data handling and reduced storage costs of the available computers. Perhaps more important, the Poisson model provides an opportunity to use a weighting logic which does not monotonically decrease the weight applied to older observations, and this may have some real appeal to the practicing manager who attempts to forecast time series values.

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## THE EDUCATION OF THE YOUNG CONSUMER: A CHILDREN'S VIEWPOINT

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### Background of the Study

The young consumer has been recognized as a viable market since the mid 1960's. Emphasis has been on understanding how youth perform in the consumer role and the socialization processes involved. (Anderson, 1978; Faber and Ward 1977; McNeal 1964, 1976, 1979; Moschis and Churchill 1979; Moschis and Moore 1979; Stampfl, Moschis, and Lawton 1978; Turner and Brandt 1978; Ward 1974; Ward, Wackman and Wartella 1975; Wells 1976). Concurrently, there has been a resurgence of consumer education. A recent issue in consumer education is who should bear the major responsibility for it. Businesses have shown a willingness to assume some of the responsibility and have developed consumer training materials. McNeal (1978) has argued that business should integrate more consumer education into its marketing strategies in spite of opposition by consumerists (Harty 1979).

Most consumer education materials for children have been developed from the point of view of adults without asking the children what consumer problems they had and what consumer competencies they lacked. It was the purpose of the present study to do this.

### The Study

Recognizing that older elementary school children are legitimate consumers (McNeal 1978), we decided to ask them directly about their consumer problems and competencies. We formulated no hypotheses for the study because of its exploratory nature. We assumed that 8-11 year olds were aware of their consumer problems and competencies and could articulate them. The random sample of 99 respondents was comprised of 45 third graders (ages 8-9) and 54 fifth graders (ages 10-11). The two groups differed in mental and chronological ages, with about equal representation of gender and social class.

Following a pilot study, the questionnaire was displayed on an overhead projector and read aloud by a researcher while each student completed a questionnaire. (They did not know of the study in advance.) Qualifying questions confirmed that the children did perform independently in the consumer role.

### Findings

Children perceived problems in making a specific purchase decision at the point of purchase because of difficulty in (1) ascertaining product quality; (2) trying out products before buying; (3) relating price to a product's worth; and (4) determining total price. Children found they often did not have enough money to buy a desired product due to poor information and planning, or discovered variations in quality of products and could not buy the preferred quality. Children were also concerned about product performance. They wondered how easily the product would break, how well it would work, and whether it was safe to use. In addition children were also concerned about adult approval of both the purchase and their purchase abilities. They also felt "it's sometimes hard to get people to sell you things," and many felt uncomfortable while shopping.

The children cited inadequacies mostly related to the problems noted above. They were: (A) Inability to con-

firm the final price of products and relate it to money on hand; (B) Inadequate criteria to evaluate familiar products; (C) post purchase disappointment in products after purchase and their own judgment ability, particularly for quality.

When asked about redress for faulty products, most children viewed the store or manufacturer as responsible, others their parents. When evaluating themselves as effective consumers, only 25% saw themselves as fully competent, 50% were unsure, and 10% felt they were not competent. Their feelings were somewhat in contrast to their behavior.

### Discussion and Implications

In the case of children, there is a chance to help them overcome these problems and incompetencies through consumer education programs. According to children in this study they need to know how to evaluate products and stores and what criteria to use. They need to know more about the mechanics of purchasing, who to ask for assistance in a store, and how to compute the total price of a product.

A result of the problems and lacking competencies of these young consumers is dissatisfaction with products and disenchantment with manufacturers and retailers. They expected to get "ripped off" or misled by stores, packaging, advertising, and salespeople. Clearly, they mistrust the business community.

These findings, though limited by sample size and research procedures, indicate a need for more business involvement in the consumer education business in two ways. First, business needs public relations efforts among children, perhaps by taking useful information into classrooms (contrary to Harty 1979) and by letting children know they share the same goals--consumer satisfaction. More important, business needs to give children criteria for judging their products, stores, packages, and in-store advertising. Retailers who attract young consumers need to be more responsive to them (perhaps through the schools) by describing purchase procedures and remedies for faulty products.

In sum, consumerists may argue that business is not an appropriate consumer education teacher while others argue that businesses should seriously evaluate the quality and usefulness of their educational materials (Education: Is It Any of Business' Business?, 1980). But it appears the children would welcome some education--some face-to-face exchange--from the people they deal with, rather than from those who have already declared business to be hucksters. Children feel that way already.

References available upon request.

WHO'S IN THE PROMOTION  
OF PUBLIC SIGNS

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Abstract

There is a possibility of finding a discipline to sponsor and incorporate in its scope the study and application of signs. Because signs - as promotional carriers - are related to marketing, some debate among behavioral theorists, marketers, and other disciplinarians may be started on who can better design, organize, and utilize everyday signs (no advertisements) so that they become more effective.

Introduction

An evolution in signs, beyond advertising posters and billboards has been taking place. Signs, like other living organisms, change with the passage of time. Today, we observe signs in the streets, doors, and other sites with different content than before. They appear congenial, inviting, and conducive to action/response which they request. Old strict verbs commanding conformity and obedience have been replaced by "Love Somebody - Use Seat Belts". If signs are the promoters of services and ideas in society and business, and if their existence and purpose is to activate responses and changes in behavior, then the state of art and evolution of this communication medium deserves attention.

Partial Classifications of Signs

Signs may be grouped into those informing the reader about something, aiding in his preferential selection of objects, and inciting behavioral response-sequences. Classification of signs by message/content produces three major categories: (1) to inform, (2) to prohibit, and (3) to activate. Signs intend to create a response -- make the receiver do something (or not do something). Signs, therefore, may be treated according to their dispositions to request action or behavior.

Sign content can bear inherently intensity and strength. Verbs such as "Do Not Enter," "No Change, No Ride," "No Credit Cards," etc. indicate strong prohibitions or request conformity. There is a trend toward motivating the reader to a favorable response through friendly persuasion rather than by demanding compliance through a compulsive style of direct orders.

On Semiotics and Marketing

New signs can be designed and pretested through experimentation so that the expected outcome (intent of message) can be measured, improved, and placed forward to achieving specific objectives.

Human civilization is dependent upon signs as signs involve or affect behavior. The term semiotics -- the theory of signs -- was adopted by John Locke from the Greek word "semeion." The theory is concerned with forms and manifestations of signs, whether in animals or humans, whether normal or pathological, whether social or personal. Semiotics is thus an interdisciplinary field of study.

The theory of signs embraces the following three fields: (1) syntactics, which is concerned with the formal characteristics (postulates) and relationships among signs; (2) semantics, which is concerned with the rules and relationships among signs; (2) semantics, which is concerned with the rules and relationships among messages contained in the signs; and (3) pragmatics, which is concerned with the relationship (interpretations) between signs and the users of signs. Some discipline, whether it is called semiotics or marketing can help in an integrative effort toward the goal of making better signs.

Who Will Sponsor the Study of Signs?

As other media of communication, signs are true expressions of our age -- an age of exploding information and instant dissemination. There is no doubt that signs can be improved so that they can assist in transmitting information of value and help solve immediate problems (endeavors, concerns) of business and the public. If promotion - as a part of marketing - is responsible for the communication process among the publics, institutions, and businesses, then the "nurture of signs" may not be far away.

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NO PETS	YOUR PET MAY WAIT OUTSIDE	WE LOVE PETS BUT REGULATIONS WANT THEM OUTSIDE
DO NOT LITTER	PITCH IN  KEEP AMERICA BEAUTIFUL	PUSH IN FOR ECOLOGY



PRODUCT SAFETY REGULATIONS AND PRODUCT LIABILITY ACTIONS:  
AN EMPIRICAL ANALYSIS

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Abstract

This paper examines the relationship between product safety regulations and product liability actions. It employs regression analysis to test the hypothesis that an increase in product safety regulations has been accompanied by a corresponding increase in product liability actions. Using linear regression equations of the form  $y = m + bx$ , two regressions were run. In both sets of regression the independent variable was found to explain a major part of the variance in the dependent variable.

Introduction

Imposition of the socially desirable requirements on business through the regulatory process is thought beneficial to the consumer. However, the fact that regulation of private industry is not free, or even low-cost, has become increasingly evident. Rising prices of consumer goods and services, declines in worker productivity, and a reduction in the rate of technological innovation have made consumers, business, and government administrators aware of the mounting cost of regulation.

Increased costs of compliance with the social regulations have compelled business to determine the marginal cost and marginal benefit of compliance. Historically, regulators (including legislators) have presumed the benefits of regulation to exceed the social cost. Underlying economic (anti-trust and rate-setting) regulation has been the thesis that corporate business exercises concentrated economic power contrary to the public interest. This economic power enables business to wield disproportionate political influence, exploit consumers, and degrade the environment and quality of life.

Regulation has multiple goals. The economic objectives are to minimize social and private costs, to improve efficiency as rapidly as possible, and to maximize technological innovation. Political aims are to insure freedom and due process. Social goals involved the enhancement of the quality of life for all Americans. Achievement of these goals requires compromise and balance. The difficulty of achieving the optimum tradeoff among these regulatory aims is seen in product safety regulation and its impact on product liability actions.

Methodology

To test the hypothesis that an increase in product safety regulations has been accompanied by a corresponding increase in product liability actions, regression analysis was employed. It was assumed that, if there were a relationship, it would be linear over the relevant period because (on the basis of exploratory investigation) variance in product liability actions would be largely explained by increases in product safety regulation.

Using a prepared computer program, the authors plotted correlation matrices for several kinds of data. Product safety action data were taken from the annual reports of the Federal Trade Commission, the Consumer Product Safety Commission, and the National Highway Traffic

Safety Administration. Product liability case data were from the Federal Courts, State of Connecticut courts and from eight other states as presented in the report of the Interagency Task Force on Product Liability.

The period included in the analysis was 1973 through 1980. More observations would have been desirable to determine whether the relationships were linear, but such data were not available. However, non-linear forms of the regressions were fitted (logarithmic, and square roots). They were rejected because the R squares obtained were lower than were derived in the linear form. Calculations of the Federal Trade Commission's and the Consumer Product Safety Commission's costs per action were made by deriving the number of product safety actions undertaken by each agency from 1978 through 1981 (estimated), determining a weighted mean, and computing the ratio of that mean to total program cost for each agency over the same period.

Regression 1 represented relationship between Total Agency Actions and Product Liability Cases. With an  $R^2$  of .482 and a significance of .0017, it is clear that product safety regulations are contributing substantially to increases in product liability cases.

Regression 2 represented Total Product Liability Cases and Product Recalls. Consistent with what one would expect, the  $R^2$  which was 0.873, was highly significant, 0.00034.

In both regressions, the independent variable explains a major part of the variance in the dependent variable. Whether the results suggest that specific agency actions are the significant variable, or whether it is the general policy impression created by them is not clear. It is conceivable that an impression of vigorous enforcement creates a climate in which potential claimants think there is a greater likelihood of winning large damage awards. Increases in liability suits may stimulate regulators to more vigorous enforcement. Some of the data imply that, as these efforts are effective, the volume of suits for specific products declines.

Conclusions

The major policy implication in this analysis is the need to move from product safety-imperative decision-making to cost-benefit decision-making at the Consumer Product Safety Commission and at the Federal Trade Commission.

The typical FTC consumer protection action costs almost \$100,000 and may be expected to increase from inflation, if nothing else. It is reasonable to assume that a point of elasticity will be reached.

When regulatory costs and litigation costs are joined, their justification requires substantial benefits. As product safety costs continue to rise, the historic presumption that benefits (economic and non-economic) are worth any cost for their attainment will come under more intense scrutiny.

References will be furnished upon request.

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Abstract

The Latin American Free Trade Association (LAFTA), a "Customs Union" of 10 member countries was founded during 1961. The basic goal of LAFTA was to accomplish economic self-sufficiency through industrialization. Lack of investment capital and entrepreneurial skills necessitated encouraging foreign investment. This study was, therefore, designed to determine whether the U.S. entrepreneurs perceived that the LAFTA would achieve economic self-sufficiency by 1985. Information provided by firms operating in or doing business with LAFTA member countries revealed that the U.S. entrepreneurs were not optimistic about accomplishing the goal of self-sufficiency.

Introduction

The LAFTA, composed of 10 Latin American countries--Argentina, Bolivia, Brazil, Chile, Columbia, Ecuador, Mexico, Peru, Uruguay, and Venezuela, was founded as a "Customs Union" in 1961. The basic objective of LAFTA was to promote regional integration through industrialization to achieve economic self-sufficiency by 1985. The inefficient agricultural economy, typical of most "developing" nations was able to provide nothing but "food and fibre" to its people. Furthermore, in the developing society with dualistic economy, subsistence and bartering dominated the marketing activities in the rural areas and a market-money economy thrived in cities and seaports exposed to foreign influence [Enke]. Low per capita income prevalent in most developing countries has been responsible for lack of savings and capital investment. To complicate this situation, the majority of available labor is engaged in inefficient agricultural activities. Improved worldwide communication has exposed the disparity in living standards between the industrially advanced and developing nations. To close the gap, "economic" or "colonial" exploitation, that is, the export of raw materials from the developing nations for processing/manufacturing in the industrialized world must end.

This study examines the impact and effectiveness of LAFTA's trade and investment policies relative to the 1985 goal of achieving economic self-sufficiency by conducting a survey of the U.S. firms operating in one or more LAFTA countries. LAFTA imposes import tariffs on products imported from non-member countries while promoting intra-regional trade among member nations [Heller]. It also imposes limits on foreign investment and ownership, encouraging joint-ventures and licensing operations to avoid exploitation.

Research Procedure

Data needed to accomplish the objective of the study were obtained by developing and mailing a two-page questionnaire to 498 U.S. firms operating in LAFTA countries, during January-February, 1980. Firms were randomly selected from the Directory of American Firms Operating in Foreign Countries, 1969, using stratified random sampling method. Ten questionnaires were returned as "undeliverable". The initial mailing and follow up resulted in 70 or approximately 15 percent response rate. Of this, only 54 questionnaires were usable. Information provided by these firms pertained basically to: (1) the structure of U.S. firms operating in LAFTA

countries; (2) types/categories of products handled; (3) awareness of progress toward achieving LAFTA goals by its members; and (4) foreign investment protection.

Findings

Responses indicated that the U.S. firms were most actively involved in only five LAFTA countries--Argentina, Brazil, Colombia, Mexico, and Venezuela. This may be due to the more cordial relationship between the U.S. government and the governments of these countries or to the political stability in these countries compared to other LAFTA countries.

Approximately 25 percent of the products imported by LAFTA represented construction and mining equipment and industrial machinery, tools needed to achieve economic self-sufficiency. Products grouped under the category "other" included petroleum and chemical products, finished goods and merchandise, and management and training services.

Guarantees against specific political risks resulting in financial loss were exercised by only 18.5 percent of the firms. Guarantees by the Foreign Credit Insurance Association were used by a mere 15 percent of the respondents, consistent with the recent findings emphasizing the need for better management abroad [Kraar].

Fifty-eight percent of the respondents did not perceive economic integration a viable goal by 1985. Reasons for this not too optimistic outlook were: (1) lack of cooperation among LAFTA members; (2) varying levels of industrialization; (3) nationalism; (4) lack of political stability; and (5) differing political and social structures and high energy costs.

Summary and Conclusion

The Latin American Free Trade Association (LAFTA) was founded in 1961 to promote intra-regional trade and industrialization among member countries. To reach its 1985 goal, foreign capital and entrepreneurial skill were needed. A survey of U.S. firms involved in this market showed that the U.S. firms were most actively involved in five major LAFTA countries. They manufactured/exported machinery and equipment, and services related to economic development, and were not optimistic about LAFTA member nations achieving their goal of self-sufficiency by 1985. This was attributed to political and social conditions, lack of cooperation among member countries, and high energy costs.

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## Introduction

Most textbooks on consumer behavior refer to the incarnation of the "consumption society theory" which was generally accepted in the golden sixties. Since the 1973-1975, this trend seems to have broken. It is evident that the consumer is facing severe constraints and that his limited means rather force him to set up a scheme of priorities after his objectives, which are non-transitive in nature. On the one side he is facing a world, which is not only uncertain but even forces a set of constraints upon him, on the other side before this situation he has to fix a scheme of priorities which however are not dictated by a single utility function, but rather by several separate objectives (non-transitive). This report, therefore, treats two kind of problems--(1) the pressure on the consumer from the uncertain outside world, and (2) the guidance of the consumer by a set of non-transitive objectives. Moreover, he is limited in his means. The golden sixties thought that this economic principle was expelled for ever.

## Consumer Prospects in an Uncertain World

In an uncertain world, consumption is influenced by alternatives which have been scanned by prior information, intuition and imagination. In social sciences prior information, intuition and imagination is assembled through brain storming and Delphi exercises. In connection with consumer prospects, brain storming is primarily useful as "a harvest of new ideas" and the session is conducted in a rather structured way. Brain storming is an interactive method--there is a continuous interaction between all the participants of the group, while in a nominal method--there is no direct contact between the participants of the group. The Delphi technique is an example of a nominal method. Delphi tries to improve in group judgment approach especially for the consideration of broad issues and for obtaining judgmental data. Special characteristics of Delphi is the convergence in opinion between the experts. This is extremely important in order to determine the probability of occurrence of an event during a certain time span. For that reason Delphi is used in cross-impact and in trend-impact analysis.

## Cross-Impact Analysis

In Delphi interrelations of events are not taken into consideration. Cross-impact analysis provides for this shortcoming. It uses Delphi and investigates the interrelations between events or between events (eventually implemented policies) and trends.

In broad terms, the following steps are taken when cross-impact analysis is used for decision making-- (1) the events are found after brain storming and/or after several Delphi rounds; (2) the panel is asked for the likelihood of occurrence of each event. The likelihood of occurrence of each event used finally is the median if a second round (the initial probabilities); (3) each event is matched to each other event in the cross-impact matrix. Each entry in the matrix shows the new likelihood of occurrence of an event b if event a-- having the estimated probability of occurrence-- occurs; (4) from the first cross-impact matrix, the computer derives a second one.

## Trend-Impact Analysis

In this program, 120 trends are considered belonging to the following groups related to the consumer: demography, education, marital status, households and families, labor force, income and expenditures and lifestyle. These trends are matched to several hundreds of probabilistic events which may occur e.g. in the following ten or fifteen years. For each relevant event the influence on the trend is estimated (the importance of the influence and the time of occurrence).

## Multiple Criteria Analysis Methods

Let us start from the following general axiom: given two actions a and a', their comparison about the totality of criteria will conduct to the following results:

$$a' \text{ Pa } \wedge a \text{ Pa}' \wedge a' \text{ Qa } \wedge a \text{ Qa}' \wedge a' \text{ Ra } \wedge a' \text{ Ia}$$

(P = preferred to; Q = at least as good as; I = indifferent between both; R = indecisive).

The "Surclassement" methods treat the P and Q part of the general axiom; I is not studied and R is considered not to exist.

## Interactive Methods

The interactive methods mostly bring clarification on the R: the decision maker is not clear about his preference. Contacts between decision maker and research team will clarify this issue.

## The Indifference Method

The indifference method stresses in particular the I of the general axiom. The indifference method may not always be applicable. Indeed the method is very difficult to apply if there are too many criteria, if price considerations are not taken into consideration and if solutions to fulfill the criteria are controversial. If there are too many criteria to take into consideration cluster-analysis will bring down the number of criteria.

## Conclusion

Sometimes solutions may be controversial in the fulfillment of the criteria. This was the case with the Zeeland-problem in the Netherlands, existing since the flooding of 1953. Heightening the dikes around the islands will not guaranty human safety but is a guaranty for the status quo of the ecological situation; a dam linking all the islands will guaranty human safety but would be a disaster for the ecological circumstances. The result is a conflict situation which may give birth to other alternative solutions of a non-controversial nature (in the Dutch example e.g. the erection of storm barriers). Otherwise one party would feel harmed by the other party.

References available on request.

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Introduction

"Products liability" is the name currently given to the liability of a seller, or other supplier of chattels, to one with whom he is not in privity of contract, who suffers damage caused by the chattel. It may rest upon the supplier's negligence, a warranty, or it may be a matter of strict liability in tort [Prosser, 1971]. The old doctrine of "caveat emptor" has been replaced with "caveat venditor," as products liability laws allow buyers to recover damages from manufacturers, wholesalers and retailers. In 1931, Chief Judge Cardozo said in Ryan V. Progressive Grocery Stores, 255 N.Y. 388, 175 N.E. 105, "The burden may be heavy. It is one of the hazards of business." Could he have envisioned that by 1965 the annual number of products liability cases would be 50,000 but by 1976 the number would be 1.5 million per year [U.S. News and World Reports, 1976] or that in 1975 companies would pay \$1 in products liability claims per every \$1,000 in sales, but that only one year later they would be paying \$2 per \$1,000 in sales [Gilliss, 1980]? Whether this is caused by litigants using the "deep pockets" theory, the contingency fee method of attorney payment, a broader view of products liability by the courts or the development of strict liability in tort, channel members must know the possible plaintiffs, causes of action, and defenses.

Bases of Products Liability for Channel Members

There are four major bases of liability. These are (1) Representations made regarding quality or nature of the product; (2) Negligence; (3) Absolute or strict liability in tort; and, (4) Breach of Implied Warranty. Each cause of action can be used against all channel members.

I. Misrepresentations of Product Nature or Quality.

The two alternatives for bringing misrepresentation cases are the Restatement of Torts, Section 402(B) and the Uniform Commercial Code Section 2-313. The Restatement can be used for misrepresentations made to the public in any way, but they are most often made through advertising or labeling. The Uniform Commercial Code requires an "express warranty," i.e. an affirmation of fact or promise which becomes part of the basis of the bargain not a public misrepresentation.

II. Negligence.

If the manufacturer, wholesaler or retailer fails to act as a reasonable person would act in the same circumstances, he is guilty of negligence. Predictably, a stricter standard of care will be applied to channel members in the future, whereby they will be held to a standard of the reasonable manufacturer, wholesaler, or retailer instead of just the fictitious "ordinary reasonable person." In this age of channel sophistication and specialization, professional comparisons like those used for doctors, lawyers, architects, etc. are likely to be extended to channel members. Possible areas for negligence include handling, warnings, inspections, representations, etc.

An open area for suits is faulty channel communication. There may be negligence in failing to communicate product problems or negligence in failing to act on information received. Even being a channel member in a channel known to have problems in the past, may be negligence. Every function performed by channel members must be done with "due care" to avoid liability negli-

gence, but even an industry standard is not conclusive on standard of care.

III. Absolute (Strict) Liability in Tort.

Strict liability in tort is governed by the Restatement of Torts, 2d Section 402(A). Strict liability means no privity of contract between seller and buyer is required nor is proof of negligence. Under strict liability, a plaintiff can recover from any commercial supplier who places an article on the market which is in a defective condition unreasonably dangerous to the consumer, user, or his property. The plaintiff does bear the burden of proving that the defect existed when it left the defendant's control. Defenses include assumption of risk, misuse and failure to follow instructions.

IV. Liability Based upon Breach of Implied Warranty.

William Prosser describes breach of warranty actions as "a freak hybrid, born of the illicit intercourse of tort and contract and partaking the characteristics of both [Prosser, 1971]." Implied warranty theory is now covered by the Uniform Commercial Code Sections 2-314 to 2-318. The implied warranty of merchantability or fitness for ordinary purposes is established by Section 2-314. Fitness for a particular purpose, if the buyer relies on the seller's skill and judgment to furnish goods for that purpose, is covered by Section 2-315. Defenses include assumption of risk, misuse of product, failure to give required notice (UCC2-607) and use of a valid disclaimer.

Conclusion

Products liability laws must be understood by all marketers, regardless of their position in the channel. Legislation, including the Model Uniform Product Liability Act, should receive each marketer's attention.

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## DECISION MAKERS IN SMALLER SIZED FIRMS

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### Abstract

The impact of decision makers in smaller sized firms is investigated. Contrary to frequent assumptions, most firms were found to have more than one decision maker.

### Introduction

Reaching the right person may mean the difference between success and failure of one's intent. Whether or not this has been achieved is often difficult to gauge. Particularly the researcher using mail questionnaires faces this problem, particularly when using Attitude, Interest and Opinion (AIO) questions. The issue becomes even more complicated as organizational size increases. Reaching the "right" individual, is a function of the organizational size and decision area. However, it is not here, where the complexities end. When dividing the decision process into: 1. The basic decision to engage in an activity; 2. Initiation of the activity; 3. Implementation of the activity; 4. Evaluation of the activity; it becomes evident that the input and impact of the individuals may also vary depending upon the stage in the decision process.

Particularly for small sized firms, researchers have avoided this complex issue by either implicitly assuming that a firm has only one decision maker or by explicitly stating the same assumption as (an unproven) fact. Although occasionally the need to consider various decision makers has been recognized, such infrequent consideration is insufficient to insure quality findings.

### Investigating the Decision Makers

To narrow the scope of the research and obtain results generalizable to similar populations, only small and medium sized firms were investigated. Using sales volume as a proxy for size, firms were grouped into these categories if they had annual sales of \$50 million and below with medium sized firms having sales between \$5 million and \$50 million and small sized firms having sales below \$5 million. The use of these cutoff values was based on testimony in congressional hearings and interviews with businessmen. The data were gathered via a questionnaire mailed to 1,004 firms in three industries (SIC's 353, 372, 382). The overall response was 30%, yielding 198 usable responses for purposes of this analysis.

The questionnaire was mailed to the chief executive officer of each firm. In the cover letter the recipients were asked to have the person responsible for, or most familiar with the decision area under study fill out the questionnaire. Within the instrument, the recipients were asked to indicate the percentage of influence each one of several possible decision makers had on the decision process. To control for decision area, the questions focused only on the export decision process which had been partitioned into the previously mentioned four areas. The results indicate that the president of the firm is a principal decision maker at all stages of the export decision process, followed by the vice president for marketing. While the basic decision to engage in an activity is mainly taken by the president, his relative role declines in the initiation, implementation, and evaluation phases. Compared to the president and the vice president of marketing, the chairman's role seems

to be a minor one, with most influence being noted in the basic decision phase. The international manager has very little input initially, but his role grows in the implementation stage. This may be due to the fact that, unless the basic decision to export has been made, a firm is unlikely to have an international manager. When comparing the roles of decision makers in small and medium sized firms, the specific decision input of the president seems to be less in medium sized firms with more influence being assumed by the marketing manager-- probably reflecting a delegation of authority. Such delegation seems to be especially strong in the initiation and implementation, but it is also evident in the evaluation phase.

It is also of importance to determine whose opinions are actually obtained, since the decision input of a particular jobholder, e.g., the president, may be perceived differently by the president than by the vice president-marketing. Therefore, the respondents were also asked to identify their own positions. The data indicated that, compared to their actual decision participation, a very large proportion of questionnaires was answered by company presidents. While the low percentage of responses coming from the positions of chairman, vice president-finance and vice president-production are somewhat reflecting their low decision input, the picture changes for other positions. Clearly overproportional responses are obtained from persons falling into the categories of executive vice president and "other".

### Implications

The results of this research show that that the assumption that only one decision maker exists within the firm is not always reasonable. Particularly in the context of the export decision, it seems that aiming at the highest level (the chairman) is not necessarily best, and that aiming only at the president of a firm may often not reflect the significant impact of other executives in the initiation and implementation phases of a decision, which appears to grow with the size of the firm. In terms of the respondents it seems that there is a relatively high response rate of nonparticipants in the particular decision process, such as the executive vice president and the category of "other". Many of these respondents may be only second guessing the opinions of others, and may therefore, although in good faith, provide misleading data.

Further research should be conducted investigating other major decision areas within the firm in order to obtain results generalizable to all areas of the firm. It would also be interesting to investigate the relationship between firm size and influence distribution more closely. Overall, it should be kept in mind, that more than one significant decider are likely to exist in an organization. These individuals need to be considered in both the data collection and the information dissemination process, and should be aimed at through a "routing" request in the cover letter.

THE EFFECT OF ADVANCED WRITTEN NOTIFICATION ON MAIL SURVEY RESPONSE AND ITEM OMISSION RATES

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The purpose of this study is to examine one of the more commonly used mail survey methodological manipulations, and advanced written notification, in terms of the effects that this variable has upon both the response rate and item omission rate of the survey. Kephart and Bressler (1958) found that advanced notification had no effect upon response rates to the survey. Parsons and Medford (1972) on two different samples, also found that prior written notification did not increase the response rates to the survey. In contrast to the two studies above, Ford (1967) found that response rates were significantly higher when advanced written notification was employed. Ford (1967), also examined the effect of written advanced notification on the rate at which questions were left unanswered (item omission rate). Ford (1967) found that item omission rates were not significantly affected by advanced notification.

A summary of past studies using written advanced notification seems to indicate the effect of this variable has had mixed results on response rates and seems to not affect item omission rates. The purpose of this study is to reexamine the effect of advanced letters upon response rates and item omission rates.

Methodology

The data used in this study were derived from a systematic random sample of 1860 purchasers of new, full-sized cars. The sample members were chosen from a list that was supplied by R.L. Polk and Company and were residents of several large midwestern cities. Half of the sample received a pre-notification post card informing them of the questionnaire and asking them to cooperate by returning the completed questionnaire when they receive it. The other half of the sample received no prior notification of the questionnaire.

One week after the advanced notice postcards were mailed, each member of the sample was sent the package of survey materials. This package included a cover letter that asked for their participation, the questionnaire, and a postage paid return envelope. The questionnaire used in this study involved four offset printed pages, which had taken fifteen minutes, on the average to complete during pre-test situations. There was a total of fifty answers called for on the survey instrument. There were a variety of question types used, although most of the questions either involved a semantic differential or were multidimensional in nature. The subject matter for the questions involved information on psychographics, demographics, and automobile purchasing behavior.

Findings of the Study

Table 1 compares response rates between respondents who received written pre-notification and those who did not receive this notification.

The difference between the two groups relative to response rates was 4.6%, which was found to be statistically significant, through the use of a t-test, at the .05 level. Thus, hypothesis number one is rejected. Among respondents in this study, pre-notification clearly raised the response rate by an amount that is statistically significant.

Table 1  
 EFFECT OF PRE-NOTIFICATION ON RESPONSE RATE

	Total Size of Group	Number of Responses	Response Rate
Group Receiving Written Pre-Notification	930	339	36.5%
Group Receiving No Pre-Notification	930	297	31.9%

Table 2 summarizes the findings regarding the effect of pre-notification on item omission rate.

Table 2  
 EFFECT OF PRE-NOTIFICATION ON ITEM OMISSION RATE

	Mean Number of Items Omitted	Range	Standard Deviation
Group Receiving Written Pre-Notification	2.18	0-34	5.08
Group Not Receiving Written Pre-Notification	3.46	0-49	9.16

The difference between the two mean numbers of items omitted was 1.28, which was found to be statistically significant at the .01 level.

Discussion

The findings of this study support the findings of Ford by indicating that a higher response rate to a mail survey was achieved through the use of advanced written notification to sample members. Furthermore, these findings indicate that the improved response rate is not at the expense of response quality. On the average, pre-notified sample members were not only more likely to return their mail questionnaires, but also were more likely to answer a larger proportion of the questions. The fact that this study found that item omission rate was lower for groups who were notified in advance of their being included in the sample, was contrary to the findings of Ford. Obviously, the issue about the effect of advanced notice on item omission rate needs to be the subject of additional study to help resolve these discrepancies. In partial support of the findings of this study,

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THE APPLICABILITY OF SOCIAL JUDGMENT  
THEORY TO ADVERTISING

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Abstract

The applicability of using the social judgment theory concepts of discrepancy and latitudes of acceptance and rejection for designing advertising messages was investigated. Serious questions about its usefulness were discovered.

Introduction

Within the framework of social judgment theory, advertising messages will have their greatest impact when the message advocates a position which falls on the boundary between the latitude of acceptance and the latitude of rejection. One way of determining latitude boundaries and the discrepancy between the advertisers and consumer's belief position is to use probabilities. For example, a person who assigns a probability of .65 to the statement, "Detergent X cleans well," may accept a statement which assigns a probability of .75 to the relationship (a discrepancy of .10) but reject one which assigns a probability of .80. Advertisers would assign these probabilities by using modifiers (e.g., "usually") rather than numbers.

For the social judgment notion of discrepancy to be useful to advertisers within group consistency, i.e., the extent to which individual scores are widely or narrowly clustered about the average probability score and within product consistency, i.e., the extent to which qualifiers are viewed as having similar or dissimilar probabilities or evaluations when assigned to different product attributes must be determined.

Method

Subjects were 35 undergraduate students taking an introductory advertising class and responded to questions such as: "Brand X" cold tablet is usually fast acting. To me, "usually" means that "Brand X" cold tablet would be fast acting \_\_\_% of the time. Respondents were asked to assign probabilities to the following qualifiers: normally, frequently, usually, seldomly, ordinarily, generally, rarely, often, always, and probably, that were linked with three attributes of cold tablets: fast acting, relieves congestion and relieves pain and discomfort.

Results

The first question dealt with the extent to which there was within group consistency in assigning probabilities. The standard deviations ranged from 16.9 to 32.6. Such standard deviations make setting latitude boundaries quite difficult and decrease the likelihood of creating a message that a large group of people would find persuasive.

A second question dealt with within product variance, i.e., the extent to which qualifier's meaning varied as a function of the attribute being qualified. In an attempt to minimize variance, three attributes,

which based on a pre-test were salient to the same product, were selected.

The data was analyzed in two ways. First, Spearman's rho was used to determine if the rankings of the mean probability scores were consistent across attributes. All coefficients were significant at  $p < .01$ . A one-way ANOVA was performed on each modifier's probability scores. Of the 10 one-way ANOVAs performed on each modifier's probability scores, three were significant (usually, generally, and always). Based on the results of the one-way ANOVAs and Spearman's rho, it seems that there is a high degree of between attribute consistency.

Discussion

Despite the high between attribute consistency, a lack of within group consistency suggests that a discrepancy approach to advertising will not increase its effectiveness. However, the research paradigm should not be abandoned for the following reasons: (1) between attribute consistency was high. While it is true that the study was designed to encourage the relationship, the fact that a strong relationship was found should not be minimized; (2) it is possible that the standard deviations, while, "large" according to the analysis, are not too large to prove effective. Future research may demonstrate that assigning a probability .10, .15 or .xx above the average probability may lead to an exceptionally effective message.

## HUMAN VALUES AND USE OF TIME

Douglass K. Hawes, University of Wyoming

### Human Values and Time Use

The history of interest in human values as moderating variables in behavior has been most thoroughly traced by Clawson and Vinson (1978). The potential utility in understanding "our society's transition into affluence" by studying both human values and the allocation of time was noted by Nicosia and Glock (1968). Most reported studies in this area have adopted the Rokeach (1973) framework of "instrumental" and "terminal" values. There are excellent summary discussions of the Rokeach paradigm found in the Clawson and Vinson (1978) and Vinson, Munson and Nakanishi (1977) papers.

Most of the articles on time usage in marketing related journals have appeared since the mid-1960's and are noted by Hawes (1977). It was noted that time usage patterns (may play a more important role in buyer behavior than previously thought." (Hawes, et. al., 1978, p. 159).

Finally, both Carmen (1978) (directly) and Robinson (1977) (indirectly) postulate that core or global values may affect time use. Carmen (1978, p. 403) suggests that "terminal values lead to holding certain instrumental values to be more important than others. These are the causes of interest and assumed roles that, in turn, are the cause of the activities in which one uses time."

### Focus of the Paper/Research Method

This paper addressed the following research questions:

(1) What is the relationship, if any, between value constellations and time usage; (2) Are the value constellations found by Vinson, et. al. and Scott and Lamont through factor analysis replicable; (3) Are demographics or values more effective in accounting for the variance in use of time? A questionnaire containing all 36 Rokeach values, an eighteen category time-budget question, and seven demographic variables was prepared. Six-point Likert scales anchored by "very important"/"very unimportant" were used to measure the importance to the respondent of each Rokeach value. Respondents were asked to indicate the approximate number of hours per average week which they spent in each of 18 activities. Approximately 300 questionnaires were distributed; a total of 174 usable questionnaires were returned.

### Results

The respondents were predominately married, between 25-44, employed in "white collar" or professional occupations, college educated, and in the middle income bracket. In order to determine the underlying cognitive dimensions in the Rokeach values, a principle component/Varimax factor analysis was performed on the total group of 36 values. Eight factors were isolated which accounted for 73.7 percent of the variance. The last two factors also collapsed logically into two higher order factors, which resulted in six factors rotated through the Varimax procedure.

While the factors appeared to "make sense" intuitively, for the most part, they did not as clearly distinguish between terminal and instrumental values as one earlier study had indicated (Vinson, et. al., 1977). On the

other hand, Scott and Lamont (1973) found a pattern of mixed loading similar to the factors found here.

Factor 1 represented traditional core values and was an even mix of "terminal" and "instrumental" values. Factor 2 was primarily an "instrumental" factor and appears to depict the independent thinker. Factor 3 was primarily a "terminal" factor, and seemed to depict a more liberal view. Factor 4 was a mixed factor and would appear to depict a "golden rule" dimension--a seeker of inner and external peace. Factor 5 was essentially a "terminal" factor and seems to reflect an outgoing, stimulus-seeking dimension or need. Finally, Factor 6 apparently connoted a friendly, social-climbing dimension.

The factor scores were correlated with the demographic variables. Factor 1 was stronger among higher income, non-college graduates, while Factor 2 appeared to represent married students or lower paid professionals. The values in Factor 3 were held by the better educated. Factor 4 was somewhat associated with younger ages. Factor 5 was associated with full-time employed persons, and to some degree with higher status occupations; while Factor 6 was associated with married women with moderate educational achievements.

### Time Expenditures by Value Constellations

Respondents positively associated with Factor/value constellation (group) 1 spent more time sleeping than those associated with groups 2, 4 or 6. They also spent less time commuting to and from work than those in groups 2 or 6; less time on "other work related activity" than any other group; more time shopping and watching TV than group 4; and more time playing with children and attending sporting events than group 5. Group 2 respondents spent more time on "other work related activity" than those in groups 1 or 6; less time in housework/home maintenance and attending sporting events than group 4; and less time reading print media than group 5. The time expenditure patterns of the other groups were less clear.

### Regression of Value Constellations on Time Budget Categories

In order to determine whether value constellations or demographics had a greater effect on time budget category variability, a series of eighteen multiple regressions were run using each of the time budget categories as the dependent variable, and each of the six factors (via factor scores) and related demographics as the independent variables. At best, the results indicated that both types of independent variables seem to "work" in different situations. There was not a clearly preferable type of variable (demographic or value constellation) in this particular study. It is encouraging to note, however, that most of these dependent/independent variable relationships "made sense" intuitively or on the basis of other studies.

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A PERSPECTIVE ON APPROPRIATE TECHNOLOGY TRANSFERS  
PROBLEMS AND PROPOSITIONS

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Abstract

In discussions of the impact of technology transfer, writers have often failed to keep the comprehensive definition of technology transfer in mind. They have most often focused on the supply side of technology transfer and ignored the demand side of technology transfer. The authors present a view of 'appropriate' technology transfers that integrates both the demand and the supply dimensions. The authors examine LDC policies on technology transfers and the role they have played in Multinational Company Strategies in technology transfer. Proposals for making technology transfers more appropriate are offered.

Technology can be comprehensively defined as all the direct and indirect means employed to produce, distribute and consume the need satisfying characteristics of products or services. The transfer of these means between nations by individuals, groups, businesses, or governments has been widely acclaimed by many as a highly significant factor in worldwide socio-economic change.

However, in discussion of the impact or relevance of technology transfer many writers have failed to keep the comprehensive definition of technology in mind. They have most often focused upon the production (supply) and distribution (movement) of technology which includes technology directly embodied in tools and machinery plus disembodied technology in the form of marketing and management techniques. Consequently, they have ignored a most important consideration, namely, the consumers' reasons for desiring any changes in their technology (demand). In the paper an attempt is made to avoid this problem by presenting a view of "appropriate" technology transfer that integrates both the supply and demand dimensions of the issue.

Our remarks are directed towards the relationship between The Multinational Corporations (MNC's) the primary suppliers of this technology and the so called "less developed countries" (LDC's) the demanders of this technology. This choice was based upon two factors: (1) The well known economic power and technological prowess of MNC's and (2) The great amount of criticism directed towards MNC's in the popular literature emanating from the LDC's. Essentially, this criticism is quick to suggest that the technology transferred by MNC's has been economically inappropriate for the "stages of development" at which the LDC's are now positioned and/or too much of a strain upon their existing cultural values and norms. Inability to easily understand and absorb the new technologies is alleged to lead to political and cultural shock, violent rejection of the MNC's as in Iran and a call for appropriate technology by reactionary nationals and external observers faced with this criticism. We can pose the following question: In what evaluative context should such appraisals of MNC's be viewed? What policy possibilities exists to resolve any goal conflicts between MNC's and LDC's that inhibit the efficient use of MNC's as development tools? To provide some insights into these questions this paper proceeds, first, to examine the basic concept of technology transfers, LDC rooted problems and policies,

and the heavy contribution these have made to MNC marketing strategies and goals. Secondly, proposals for making technology transfers more "appropriate" are offered and supported.

In the paper we have attempted to offer a perspective on the issue of technology transfers which may facilitate speedier progress toward goals when scrutinized in context. Although we have offered several proposals to aid in finding a solution, we make no claim that these proposals are exhaustive nor applicable to every technology transfer situation. We have given our support to the "neutral" or "mixed" as opposed to capital or labor intensive strategies for industrial-development but have maintained the position that each country's industrial-development process must be viewed on an individual basis.

It is painfully obvious to anyone who has ever visited a LDC that the standards of living of large portions of the population are far below that of the developed countries and the few industrialized countries of the LDC's. Consequently, discussion of employment and unemployment as means of income production are vital components of the concept of appropriate technology. However, while on an intuitive basis there can be little doubt that increased income (not simply more jobs) would be of tremendous humane and social value, it is not at all clear that a transfer technology can be assessed as "appropriate" or "inappropriate" on the basis of any "unemployment data" alone. The concept of unemployment in LDC's and cross-culturally is far too poorly defined, and the reality itself is perhaps too massive in the short-run to yield to technology manipulations. Yet, we should urgently try to reduce the problem of insufficient income, knowing full well that we need better tools for assessing the progress of the effort. Consequently, a concept of "appropriate" technology was proposed in Section II that focused upon the systematic interaction of development goals and market forces in each LDC. Section II concludes with a sampling of the various attitudes and practices which are thought to prevent or inhibit the implementation of either labor-intensive or mixed strategies. The concept of the interactive context of MNC's is advanced to show that they are actors and acted upon in a LDC cultural system. Any evaluation of the costs and benefits of MNC technology transfer must take this situation into consideration.

In Section III, a review was made of what is known about benefits, costs and control policies. Finally, we make several proposals aimed to make technology transfers more "appropriate" if not "appropriate" in their own right.

In conclusion, LDC's, MNC's, "Developed Countries, and international institutions and organizations must all work together to develop and transfer technologies that promote a pride of achievement among LDC populations. We are aware the cooperation and coordination among so many factions, all seeking to secure and insure their own interests, will prove difficult. However, coordination and cooperation as opposed to conflict is the only means that will secure and insure the existence of so many diverse interests within the rapidly changing, volatile world of today.

COMPARISON OF THE MARKET STRUCTURE OF LEBANON  
BEFORE AND AFTER THE CIVIL WAR OF 1975

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Mustafa Aghar, Touche Ross & Co.

Environmental Factors

Before 1975, the government promoted trading activities by aiding in the erection of warehouses and in promulgating low-tariff transit schedules. The war's chaos gave rise to "militia" leaders, and the new marketing system was based on belonging to a certain militia system. This involved payoffs, and so many firms relocated outside of Lebanon. The inefficient legal system was eliminated by the War, and smuggling and black-marketeering increased greatly. Lebanon's geographic location is conducive to trading; however, the main port of Beirut was destroyed, and as a result, most shipping was transferred to Tripoli in the south. Tripoli could not handle the large volume Beirut did; furthermore, land roadblocks crippled truck shipping, and so commerce dropped dramatically. Several light industries, including food packaging and semi-processing and printing, and banking and tourism were growing before the War and were expected to continue that growth, even in light of the 1973 Middle East War. However, the War totally paralyzed the tourist industry and the canned food industry, substantially damaged the printing industry, and turned most foreign investment to other Middle East nations, mainly Jordan and Egypt.

Distribution Factors

Because of its small size, its preference for foreign merchandise, and other reasons, channels are relatively short. Exclusive agency is used for the most part, with one importer handling many different brands. The War greatly reduced the volume of imports, although the exclusive agent still predominates. Most importers and wholesalers were located near the port of Beirut before the war, but afterward, they spread somewhat away from that immediate area.

Before the War, most retailing activities were concentrated in downtown Beirut. There, the small, family-owned stores were located next to each other. Because of lack of working capital and a shortage of space, they operated on a high markup-low volume basis and made intuitive decisions for the most part. As a result, profits were suboptimal, and fear of insolvency was always present. Stores remained open six days per week, 11 hours per day, without benefit of any promotions. 55% of stores carried mostly food items. Average annual sales per store were \$75,000 (US). Department stores and supermarkets had been unsuccessful there, for residents preferred shopping at the single-line stores. The War destroyed downtown Beirut; as a result, stores relocated to residential suburbs. Operating expenses increased, many brands were no longer available, inflation increased, and itinerant peddling began in earnest. A dual distribution system also began, since the Eastern Christian and Western Muslim sections would not trade with each other. Christians began using the Port of Jounce, five miles north of Beirut, while Muslims began using the Port of Tyre, 40 miles south. Wholesaling and importing facilities gradually moved to those areas away from the old Port of Beirut neighborhood.

Transportation modes did not change greatly after the War. Trucks handled most shipments, although their

prices were higher than rail; however, railroads were unreliable, slow, and often unavailable, since rail lines did not extend to all Middle East nations. However, truck volume dropped somewhat as some consumer goods were transported using private automobiles and private pick-up trucks.

Consumer Behavior

The War did not change the innate preference for foreign goods, perceived as of higher quality before and after. Lebanese spend a good deal of time shopping for bargains, for haggling is common. Store loyalty, on the other hand, is prevalent, as a result of their extension of credit to low-income consumers (food stores only). However, credit extension stopped almost completely after the War, since many consumers were unable to meet their payments. No longer do Lebanese consumers spend long hours shopping and haggling for bargains. Many items are scarce, Muslims and Christians are confined to their own sections of the city, and evening sniper fire all have turned Beirut into a seller's market. Furthermore, gasoline is scarce, and families no longer have two automobiles--they have more than doubled in price since the War.

Advertising

The advertising industry was very severely damaged by the War. Local and foreign ad agencies relocated to Greece, Cyprus, and Bahrain for the most part. The shift was gradual, and most plan to return when normalization occurs. The major media are newspapers and magazines, along with broadcasting, cinema, door posters, billboards, and store signs. Ads are run in Arabic, English, and French. Most broadcast ads are filmed or taped overseas and dubbed into Arabic and French. Repetition of basic ads is quite common.

CONJOINT MEASUREMENT BY MAIL SURVEY:  
AN EMPIRICAL INVESTIGATION OF ALTERNATIVE INSTRUMENTS

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### Abstract

Conjoint preference data on a relatively complex issue were collected using two different mail survey instruments. Although the correct completion rates for the two formats were significantly different, the results obtained were quite similar - leading to the conclusion that the mail survey technique is indeed viable.

### The Study

During the past few years, the use of conjoint measurement has found substantial acceptance in marketing research. However, while the internal and external validity of the technique has been demonstrated in several research contexts (Green and Srinivasan 1978, Parker and Srinivasan 1976, Davidson 1973), most data collection techniques used so far involve the use of expensive personal interviews. Only one study so far appears to have used a mail questionnaire to elicit conjoint measurement responses (Arthur Young 1979).

The major purpose of this study was to investigate the feasibility of using a mail survey to collect preference data for conjoint stimuli, and to assess the relative merit of two different data gathering instruments.

### Methodology

The stimulus object used for the study was a public policy issue dealing with transportation energy conservation. The major attributes of the program and the alternatives within each attribute were: government support for mass transit systems (3 alternatives), reducing gasoline consumption (3 alternatives), controlling gasoline supply (5 alternatives), and uses of additional gasoline tax (4 alternatives).

The two instruments tested in the study were short, two-page questionnaires each printed on a single 8½" by 11" sheet. The front side of the two questionnaires was identical. It listed the alternatives for each of the four major attributes and, for each set the respondents were asked to score the alternative they liked best as 10 and score the remaining alternatives from 1 to 9 (tie scores were allowed). Unacceptable alternatives in any set were to be marked with an X instead of a numerical score.

The format on the back side of the two instruments was different. The format labeled "list" in this paper, presented twenty public policy programs composed of a combination of one alternative from each of the four major attributes. The twenty combinations (rows) were selected on the basis of a Latin square design. Respondents were asked to assign a score of between 0 to 100 to each of the rows. Tie scores or Xs were not allowed.

In the format referred to as the "chart" in this paper, a full array of all possible combinations of the alternatives under the four major attributes was presented in a grid pattern. Of the 180 combinations (cells) thus obtained, a total of twenty four cells (twenty same as in "list") were given a light shading. Respondents were asked to rank only the shaded cells.

Respondents were randomly selected from the WSU Consumer Panel consisting of 1,200 Dayton area households which

are demographically representative of the metropolitan population. On a national basis however, the Panel somewhat over-represents higher income, higher education households. Of the 242 chart format and 241 list format questionnaires mailed, 372 were returned by Panel members for a response rate of 78.4%.

### Results

Rankings assigned to different attribute combinations by respondents who seemed to have followed the instructions correctly were analyzed using a dummy variable regression analysis to decompose the average ranks for the combined data into unique component weights for each state of each attribute.

Both formats seemed to have extracted similar information. All of the attributes exhibited monotonic relations except the encouragement of mass transit where both formats found free parking for car pools more favorably evaluated in combination than separately. On the other hand, some differences in order and magnitude of evaluations did emerge leading to questions about the effect of the formats.

The percentage of questionnaires completed correctly differed significantly between the two formats (chart-48.6%, list-85.6%). A large part of the 37% difference was accounted for by the 13.8% and 9.7% differences in leaving the entire combinational task blank and using the same score more than once. The chart format was also associated with a larger nonresponse rate (25.5%) compared to 18.4% for the list format.

Respondent subsets receiving different questionnaire formats, and those responding, showed no significant chi-squares for any of the 16 demographic variables tested. However, further analysis of correctly completed questionnaires exhibited one chi-square significant at the 0.033 level (household head's education) and one at the 0.059 level (head's age). There was a strong direct relationship between education and completion of the chart format, but not for the list format. Combining the two formats nearly eliminated the education effect. For all returned questionnaires, ratings for the fifteen states of the four attributes were not statistically different between the two formats except for some significant differences between the responses for the correctly completed subsets. Thus, the general pattern reflected more similarity than differences between evaluations evoked by the formats. Finally, the format effects were partly attributable to the differential effect of education on responses to the chart format.

### Conclusions

It appears quite feasible to conduct conjoint analyses through mail surveys of a general population sample even on topics as complex as public policies. Although a variety of different formats can be used, choice of format should be carefully investigated. In our study, aggregate conclusions were similar between the two formats even though the response rate was significantly better for the list format.

### References

Please contact the authors.

THE NEED FOR PRODUCT ADAPTATION TO MEET CHANGING  
CONSUMER PURCHASE INTENTIONS IN THE 1980's -  
THE AUTOMOBILE - A CASE STUDY

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Background and Purpose of This Study

Conclusions

The American automobile industry is in serious trouble currently (1980) and has seen its market share eroded during the 1979 and 1980 model years. In fact, in 1980, the U.S. automobile manufacturers experienced the worst sales year in over 10 years and sustained heavy losses in 1980. While it is indisputable that the 1980 recession has been a contributing factor to the poor sales and profit performance of the U.S. auto manufacturers, there are more serious underlying market variables that have contributed heavily to the current poor market performance by the domestic manufacturers. It appears that the domestic manufacturers did not correctly analyze consumers' perceptions as to the types of transportation vehicles that consumers wanted and/or needed to meet the changing market and environmental conditions. There is much evidence to indicate that the domestic manufacturers did not achieve an adequate product mix.

The purposes of this study are to examine consumer purchase intentions relative to the type of product mix consumers desire to purchase in the early 1980's. The following types of data were collected: (1) current automobile ownership patterns of consumers in Newport News/Hampton SMSA; (2) consumer purchase intentions regarding the next automobile to purchase; (3) major motivations to purchase the next automobile; (4) potential environmental factors acting as deterrents to the purchase of an automobile.

Research Methodology

The primary marketing research survey was undertaken utilizing a sample of 228 respondents selected on a random basis. Personal interviews were conducted in the Newport News/Hampton, Va. SMSA in March 1980. Because of the nature of this study, research designs were essentially exploratory in character. The data findings on purchase intentions and purchase perceptions were analyzed using five socio-economic variables. The findings as to significant differences of purchase intentions and purchase perceptions based on these five socio-economic variables are the subject of another study.

Data Findings

The size/type of replacement car envisioned to be purchased next by the 228 respondents are shown in **Tables I & II**.

Table I  
TYPE-SIZE OF CAR LIKELY TO BE REPLACED  
FIRST AND TYPE OF REPLACEMENT ENVISIONED\*

	Sub-Compact	Compact	Inter-mediate	Full-Size	Not Certain	TOTAL
	%	%	%	%	%	%
Type-Size Of Car Likely To Be Replaced	14.9	18.9	24.1	34.2	7.5	100.0
Type-Size Of Replacement Envisioned	30.3	36.8	25.0	6.1	-	100.0

\*Source: Survey conducted in March 1980 in Newport News, VA

1. The sub-compact size car and the compact size car appear to be the types of vehicles most favored for future car purchases by respondents in this market area.
2. As a motive power plant, the 4-cylinder engine is gaining substantial acceptance with consumers in this market area. This represents a complete shift in consumer acceptance of the 4-cylinder engine based on a previous study in 1977 in this same market area by the authors and based on sales data from auto industry sources of consumer acceptance of this size/type of engine three years ago.
3. An almost equal shift in consumer preferences is evident in body styles with consumers moving away from the 4-door body configuration to a 2-door and 3-door body configuration. The 3-door configuration appears to be experiencing the fastest growth rate in terms of consumer preferences.
4. Approximately three out of every four respondents in this market area intend to continue purchasing automobiles with air-conditioning, regardless of the car size.
5. Fewer consumers in this market area are demanding automatic transmissions as a product accessory in their next car. It can be concluded that manual transmissions, for a variety of reasons, are gaining in popularity.
6. As might be expected, fuel economy was cited by respondents more than any other single factor as a purchase motivation to buy an automobile to replace a current vehicle.
7. High interest rates and inflation were cited as the two potential environment factors most likely to deter consumers from the purchase of a car in the near future. Thus, it can be concluded that high interest rates and the increasingly higher prices of automobiles as a result of inflation are the two most significant "braking forces" on consumers in deterring consumer purchasing of the automobile.

While it is the opinion of this study that the data findings relative to consumer automobile intentions have significance in terms of national consumption patterns, it must be pointed out that the data findings and any conclusions thereof are based on a random sampling of respondents in the Tidewater area of Virginia.

Table II  
ENGINE SIZE BY CYLINDERS\*

Type of Vehicle	4	6	8
	Cylinders	Cylinders	Cylinders
	%	%	%
Current Auto To Be Replaced	25.9	33.8	39.5
Replacement Car	45.6	42.5	10.5

\*Source: Survey conducted in Mar. 1980



## FOREIGN DIRECT INVESTMENT IN THE U. S.-STRATEGIC PROBLEMS & ISSUES

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### Abstract

This paper briefly reviews the nature of foreign direct investment (FDI) in the U. S. and outlines key issues confronting both the U. S. government and foreign-owned firms. Because there is a paucity of literature, further research is suggested.

### Introduction

Over the past few years, FDI has increased substantially. Between 1973 and 1979 FDI grew by 160 % to \$52.26 billion. FDI, defined by the Dept. of Commerce as 10% or more foreign ownership of any American business, has occurred in all industries and comes significantly from the Netherlands, the UK, Canada, Germany, Japan, Switzerland, and France.

Foreign businesses are attracted to the U. S. because they want diversifications, natural resources, skilled staff, prestige, new technology, political and economic stability, and profit. To achieve the objectives, investors employ various approaches. The Europeans set up U. S. manufacturing subsidiaries or join operations with other U. S. firms; the Japanese set up sales and service facilities in the U. S. and manufacture elsewhere.

The scope and nature of FDI present several strategic problems and issues for both the U. S. government and foreign-owned firms. Some of the FDI issues and problems are briefly examined below to provide guidelines for future research.

### American Issue

The basic issues for the U. S. are: Should it encourage or discourage FDI? What policies should it follow? The current U. S. policy is that of nonintervention. This "hands off" policy is based on the premise that free market forces allocate resources better and promote U. S. economic and political interests abroad. There do, however, exist at the state and local levels laws and policies which attract or restrict foreign capital.

Since each \$26,000 investment creates one job, many authorities do compete for investments from abroad and offer incentives such as deferred tax plans, training programs, and land at no cost. But, some 30 states have taken measures in response to the demands for strict controls from different groups.

Farmers blame overseas investors for rising land prices. Local communities-e.g.-Florida-complain about the growing presence of foreigners. Unemployed persons and struggling businesses blame foreign competition for their problems. Only the customers, employees and managers of the foreign-owned firms seem not to care about the ownership.

The federal government is aware of the growing criticisms and political pressures. It is also aware of the undesirable consequences of restrictive measures

against foreign capital. U. S. government efforts to discourage investments from abroad could result into foreign governmental policies and actions that could hurt the vast U. S. political and economic interests abroad. Thus, the dilemma remains difficult to deal with.

### Management Dilemmas

For executives in the U. S. and abroad, foreign ventures present several complex dilemmas, also.

In most acquisition cases, foreign buyers follow the "hands-off" approach for awhile, allowing the acquired firm's management to continue. As the parent company gains more knowledge, it increases its influence. Executives from home are sent to direct U. S. operations and to install managerial practices that underline their ethos, values, and styles. Because foreign and American business philosophies, orientations, commitments, and expectations differ considerably, foreign management approaches are often far apart from American. For example, compensations in Japan are based on temporal (age or seniority) considerations; while in the U. S. they are based on the principles of "equal pay for equal work" and performance merit.

The extension of home management practices may thus represent differences and could cause administrative problems. There could be legal problems, also. Three American executives of C. Itoh (America) have sued their employer, alleging that the parent firm's expatriate employment policies give preferential treatments to its Japanese executives; the suit underscores the legal and political complexity of multinational business. American antitrust laws are unfamiliar legal problems, and force many foreign firms to alter their plans for the U. S. market. U. S. product liability laws, immigration laws, differing product definitions of U. S. customs, delays in government approval, and laws barring foreign business from such projects as defense, are among troublesome legal problems.

Other strategic dilemmas include: consumerism movements, technological differences, relatively high labor turnover in the U. S., a hostile environment facing foreign staff and their families, communication difficulties, and differences in financing methods.

Because of these and other management issues, the parent firm adopts plans that are overcautious, programmed for a slow pace, and too modest. The modest management strategy leads to the commitment of insufficient funds, causing operating problems for the U. S. affiliate. Overall, the strategy fails to take advantages of the available opportunities.

### Conclusion

Unfortunately, very little is known on the FDI problems and strategies. Research efforts on the subject are inadequate. Lack of good empirical data necessitates further studies and in-depth analysis. A research study by the author is in progress, however.

## RETAIL THIEVES: BY THEIR TRICKS YE SHALL KNOW THEM

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Shoplifting is the pilfering of merchandise from store displays by customers and persons posing as customers. Employee pilferage is the theft of merchandise and/or cash by the store's personnel. To combat these losses, the retailer must develop and maintain a store security program; a necessary prerequisite to any store security program is the detection of criminal activity. Like most thieves, shoplifters and employee pilferers tend to develop definite patterns or modes of operation (MOs). The purpose of this paper is to develop a typology of retail thieves based on their MOs.

### Typology of Shoplifter

The Changer. The changer is the shoplifter who steals by changing the price tag before purchasing the merchandise. Price changes are accomplished by (1) altering the retailer's price tag, (2) switching price tags, and (3) substituting realistic fake tags for the original price tag.

The Wearer. Trying on merchandise and wearing it out of the store is the principle MO of the wearer. The "open-wearer" is a bold shoplifter who simply tries on articles of clothing, removes the tags and openly wears the pilfered merchandise while shopping and exiting the store. The "under-wearer" is the shoplifter who pilfers articles of clothing by concealing them under their own loosely fitted outerwear.

The Walker. The walker is a shoplifter who has perfected the skill of walking naturally while concealing and carrying shoplifted merchandise between her legs. To further conceal their activities, walkers often make small purchases and exit the store through checkout stands.

The Booster. The booster is a shoplifter who uses a number of concealment devices in their pilfering activities. By pushing and shoving merchandise into concealed areas of parcels and/or clothing, the booster is capable of "boosting" a tremendous amount of merchandise. The devices used by this shoplifter include booster boxes, hooks, bags, coats, and panties.

The Blocker. Concealment of shoplifting activities is accomplished by the blocker when he or she obstructs the vision of store personnel. Working with a partner, the blocker simply stands between the salesperson and his/her shoplifting partner. Working as a single, the blocker can conceal shoplifting activities by draping a coat over one arm and using it to shield the pilfering activities of either hand.

The Diverter. Diverting the attention of store personnel while a partner engages in shoplifting is the basic MO of the diverter. Salesperson diversion is accomplished by engaging the salesperson in conversation or generating some fake disturbance--fighting, falling, or fainting.

The Sweeper. The sweeper is the shoplifter who has refined the technique of reaching over a counter display in an apparent attempt to examine merchandise at the display; however, in the process of bringing the arm back, merchandise is swept off the counter into the

container which is used for concealing and transporting the pilfered merchandise.

The Carrier. The carrier pilfers merchandise by simply walking into the store, selecting a desirable piece of merchandise, removing the store's tags, affixing a fake sales slip and carrying it out of the store. Like the outer-wearer, it is the boldness of the carrier's actions that permits it to be successful.

The Wrapper. Some shoplifters conceal merchandise by wrapping or bagging the items before removing them from the store. By using the store's own bags, wrapping papers, or gift boxes which are secured by an earlier purchase, the wrapper has a nonconspicuous vehicle for concealing and transporting shoplifted merchandise.

### Typology of Employee Pilferers

The Smuggler. Employees have devised a number of ways for smuggling pilfered merchandise. The smuggler uses coats, trash cans, lunch buckets, purses, and a variety of packages to conceal and transport merchandise from the store's premises.

The Dipper. The dipper steals cash money using a number of methods--short rings and fraudulent refunds. A "short ring" involves not "ringing-up" the sale or "ringing" less than the purchase amount. "Fraudulent refunds" are used to steal cash money by writing up customer refund slips for merchandise that has not been returned by customers.

The Embezzler. As a highly trusted employee, the embezzler is in a position to take advantage of that trust to divert the retailer's funds to either his or her permanent or temporary use. Simple embezzlement schemes include: (1) adding the names of relatives and fictitious employees to the payroll and collecting multiple paychecks, (2) creating dummy suppliers and falsifying purchase orders and collecting for fictitious shipments and (3) falsifying time cards and overtime records.

The Stasher. By hiding highly desirable merchandise in a secure place within the store until later in the selling season when the merchandise is marked down for clearance, the stasher is able to purchase the merchandise at the discounted price.

The Partner. The partner is the store employee who aids and abets the pilfering activities of outside individuals by supplying them with information and devices that increases the chances for successful theft.

The Discounter. The granting of unauthorized discounts to friends and relatives is the most common pilferage activity of the discounter. By purposefully undercharging or not charging for merchandise, the discounter is sure to create some satisfied customers, but not at a profit for the retailer.

The Eater. The eater is a pilferer who feels that he or she is entitled to a "free lunch"--a small occasional sampling of the retailer's food and beverage lines.

THE NON-AVAILABILITY OF ADVERTISED SPECIALS: GROCERY SHOPPER  
ATTITUDES vs. FOOD CHAIN EXECUTIVE OPINIONS

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Abstract

This study is a continuation of an earlier effort which examined grocery shopper reactions to situations where advertised specials were not available. Perceptions and opinions of consumers and food chain executives are compared with emphasis placed on shopper reactions when advertised specials are unavailable and experiences concerning rainchecks. On the basis of chi-square results, significant differences occurred between food chain management and consumers.

Problem

In a 1971 ruling, the Federal Trade Commission (FTC) made it an unfair trade practice for supermarkets to advertise sale items that were not available in sufficient quantities to match the "reasonable expectations" of consumer response. The ruling applied even in cases where disclaimers appeared in ads or where issuing "rainchecks" was standard policy.

Compliance with the ruling was slow as evidenced by a 1972 complaint made by the FTC against A&P. The charges were based on an analysis by the FTC in 12 cities and by University of North Carolina-Chapel Hill college students in the cities of Raleigh, Durham, and Chapel Hill, North Carolina. (Advertising Age, July 31, 1972)

The problem is greatly accentuated by the fact that a large proportion of grocery shoppers have come to rely on weekly newspaper ads in shopping for specials. In a 1972 study by the Bureau of Advertising, two-thirds of the women interviewed reported that they prepared a shopping list prior to entering the supermarket. Of this two-thirds, 70 percent reported checking food advertisements for food specials, and 83 percent primarily focused on newspaper ads. (Editor and Publisher, September 30, 1972)

Objectives

The compliance problem is compounded if executives do not perceive the situation clearly. The objective of this study was to determine those aspects about which executives need some better feedback. Perceptions and opinions of consumers and food chain executives were compared with emphasis placed on shopper reactions when advertised specials are unavailable and experiences concerning "rainchecks".

Research Methodology

The consumer research was conducted in a four county area in western North Carolina with a population of approximately 200,000. \* Data were collected by means of

Aside from Asheville, with a population of 60,000, the four county area is basically rural in nature. A large proportion of the area's income is generated by textiles, farming, tourism, and a university of 6,300 students. The overall 1978 average family income was \$9,100, and the average education level was 10.2 years completed.

a telephone survey of randomly selected households in the summer of 1978. Interviews were undertaken by students enrolled in a marketing research class, and attention was drawn to the person responsible for the majority of the grocery shopping activity. After callback attempts, responses totalled 182.

The sampling technique used in the survey of grocery executives was that of total universe enumeration as determined by a listing of 390 food chains contained in the 1979 Progressive Grocer Marketing Guidebook. In February, 1980, questionnaires were mailed to each of the respective firms' headquarters offices with attention being drawn to the president. Usable responses included 134 executives, or over one-third of those contacted.

The following null hypothesis was introduced to measure whether significant differences in responses existed between food chain executives and consumers:

There are no differences between food chain executives' perceptions and consumer responses concerning actions taken when sale merchandise is unavailable, and problems related to "rainchecks."

Findings

Half the consumers were loyal to one store, while over 40 percent shopped at two or three different stores or the store with the best advertised specials. Only 20 percent of the food chain executives perceived their customers as shopping at one particular store, with 70 percent reporting that they shopped at more than one store. The results indicate that grocery shoppers, contrary to the beliefs of food chain management, are more loyal and less willing to travel to competitors.

Of the consumers who did experience the non-availability of advertised sale items, slightly less than half brought the matter to the attention of store employees. For the sake of validity, executives were asked to describe, in general, their perceptions of action taken rather than to estimate a percentage of those who would or would not act. Complaints very seldom travel beyond the store level, thereby making such information difficult to obtain. Over 80 percent of the food chain executives felt that consumers made inquiries. It would appear that food chain management perceives more shoppers seeking remedies for grievances than actually is the case. A large proportion of consumers seemed to treat missing sale merchandise as a common occurrence not worth inquiring about.

Comparisons concerning the most frequently occurring problems relating to "rainchecks", indicated that both food chain executives and consumers expressed the same level of concern for "raincheck" availability not being mentioned by the cashier and the "raincheck" being received but never redeemed. The executives attached a greater importance to the problem of the "raincheck" policy being known with no attempt made to obtain one, while the consumers placed more emphasis on "raincheck" expiration and sale merchandise never being received by the store.

## COMMERCIAL BANKS AND CARIBBEAN TRADE

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Exports, to a greater extent than ever before determine the state of the economy of the United States and the Caribbean. In particular, the expansion of non-traditional exports should be a major area of growth in the future. The exporters of these non-traditional goods are relatively inexperienced and hesitant about entering world markets. The same phenomenon describes a small or medium-sized U.S. firm when faced with world markets. Historically, both the Caribbean Basin and U.S. exports have been financed privately with few official export promotion policies. This is still essentially the case although official Basin financing of the non-traditional export is expanding. Certainly seminars such as the one in Haiti on this subject are a good indication of a changing scene and an enhancement of the financing of non-traditional exports.

### U.S. Governmental Agencies Concerned With International Trade Financing

The export-Import Bank (EX-IM) was established in 1943 to facilitate U.S. exports. Since 1945 it has operated as a wholly-owned U.S. Government Corporation. The primary function of the Export-Import Bank is to encourage commercial banks and other private sector financial institutions to assume a large share of the funding, burden and risk to finance exports. The EX-IM Bank has limited funds since it is not supported by annual U.S. Government appropriations. Its life has been extended until 1985 with \$15 billion additional dollars available for direct funding of exports from the United States. The EX-IM Bank currently supports about 12 percent of the U.S. exports. This means that about nine-tenths of the U.S. exports are financed privately.

U.S. exports to the Caribbean Basin have been and are facilitated through EX-IM support, principally through EX-IM Bank Insurance programs which are operated in conjunction with the Foreign Credit Insurance Association (FCIA). The EX-IM Bank provides political risk coverage and reinsures FCIA against excessive commercial losses. FCIA assumes the normal commercial risk. From 1970 to 1977, 58 percent of the Export-Import Bank activity in the Caribbean Basin was in such insurance programs. In 1977, the proportion jumped to more than 80 percent as the EX-IM Bank significantly reduced its worldwide and basin direct loan authorizations and loan guarantee programs.

The direct loan program of the EX-IM Bank supports long term financing of five to 15 years for major capital equipment purchases. The EX-IM Bank has also provided medium term direct credit to foreign financial institutions which in turn lend U.S. dollars to foreign buyers of U.S. imports. These credits are through EX-IM Bank's cooperative financing facility (CFF). The extent of EX-IM Bank's direct intermediate loans of the Caribbean Basin area is nominal. In 1977, it was only \$56 million. The EX-IM Bank Discount Loan Program, whereby the EX-IM Bank provides commercial banks a place to discount fixed rate eligible export obligations, has been significantly reduced.

Another Government agency involved in financing the exports of U.S. commodities to the Caribbean Basin is the Commodity Credit Corporation (CCC) operated by the U.S. Department of Agriculture. This is an export credit

program for specific agricultural commodities such as corn, cotton, cottonseed, peanuts, soy beans, eggs (processed), sorghum, soy meal, tobacco, wheat and wheat flour.

The CCC Export Credit Program supplies short term credit for periods ranging from six months to three years. In 1977 the amount financed was only \$500,000, whereas in the previous year \$21 million of U.S. agricultural exports to the Caribbean Basin were financed through the CCC.

### Latin American and Caribbean Basin Government Agency Financing

Traditional Caribbean exports have been financed privately; but as Basin governments have sought to expand and diversify exports, the small or less internationally experienced firms have been induced to export with support from official export credit facilities and tax incentives. For example, in Mexico City, Mexico the National Bank of External Commerce, established in 1930, finances Mexican exports, particularly those of agricultural origin. This Mexican bank, in 1976, financed directly 2.4 billion of the 53 billion pesos of Mexican exports in that year.

Other export credit entities in the Caribbean Basin include the Central Bank of Costa Rica, San Jose, which supports exports through the state-owned commercial banks. The Dominican Republic's Center for Promotion of Exports (CEDOPEX), Santa Domingo, in 1977 was given the authority to act as an intermediary in providing non-traditional export rediscount facilities for commercial banks with credits up to one year and up to \$75,000. Jamaica operates a comparable export credit facility through its central bank in Kingston. The Barbados Central Bank, Bridgetown, has backed an export credit facility.

Probably the newest development in Basin non-traditional export finance is the Latin American Export Bank (BLADEX) incorporated in 1977 by 15 Latin American countries. This is headquartered in Panama. In May 1978, the bank had authorized capital of \$99 million, \$20 million of which was paid in. The capital was distributed in thirds: one third to Latin American central banks, one third to commercial banks, and one third to international commercial banks. The bank will deal with principal and medium term operations and some funds will be allocated to discounting acceptances, all to finance the export of primary non-traditional commodities.

Another source of funds is Latin American Bankers Acceptances. As you know, bankers acceptances are negotiable time drafts used to finance exports, imports and storage of goods. The time draft becomes a negotiable bankers acceptance when a bank assumes the obligation to make payment at maturity. The use of bankers acceptances has expanded at rates far surpassing trade growth. At the end of 1977, dollar acceptances outstanding in the United States reached 25.7 billion, nearly three times the 1973 level.

References available on request.

## RETAIL EDUCATION: BRIDGING THE GAP

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### Abstract

This paper first reviews the nature of the retail educational gap, then indicates some likely courses of action to remedy the situation; a case study example is also supplied.

### The Nature of the Problem

Several recent studies have been aimed at discovering the extent of the retail educational gap (e.g., Coe, 1978). These studies have shown that retailers generally want a more practical approach to retail education than what is generally taught in most business schools, while academics tend to stress more theoretical notions. Both aspects are important, of course. The key aspect is one of effective integration. Some possible steps toward this integration are discussed below.

### Integrating Theory and Practice

An integration of the theory versus practice issue appears to rest on several points, all drawn from the available literature as well as from discussions with retail executives and retail educators. These include that an effective retail educational program should:

- (1) be based on research. Such research should (a) focus on the continual updating of current concerns, directions, and scope of the retail environment, (b) investigate the viability and nature of the researching schools and other (possibly competing) retailing programs, and (c) analyze possible directional changes which should serve to make for more current, accurate and effective retail educational programs.
- (2) feature active involvement of the retail community, students and interested faculty. An effective integration of retail theory and practice in retailing programs should seek to involve the retail community as much as possible in classroom activities. This involvement may take several forms, some of which are:
  - (a) bringing speakers from the industry to address retailing students
  - (b) involving retailers in course planning and design
  - (c) promoting day on the job and internship programs with retail sponsorship
  - (d) emphasizing retail placement activities
  - (e) setting up continuing education and executive development classes.
- (3) utilize innovative and experimental classroom activities. These may include case studies, simulations, and role playing exercises.

### A Case Study Application

To illustrate how the above points can be utilized in a collegiate retailing program an example will now be given from our experience at the University of Southern California. At U.S.C., the retailing program is heavily based on research. Seven of ten full-time faculty members are actively involved in retail or distribution research. Further, students are also involved in research activities, often with industry

support. The food retailing class, for example, annually conducts a large survey relating to some facet of the supermarket industry. Students in the general retailing emphasis have just completed a pricing study, and graduate students have been engaged, with faculty members, in retail case development (for example, with Carter Hawley Hale Stores).

Active involvement of the retail community is also sought at U.S.C. Typically, guest speakers are drawn from a broad spectrum of retail stores and functional areas. A special effort is made to bring back previous U.S.C. students to class to speak on their current positions, and to discuss the mix of theory and practical knowledge that goes into their jobs. Retail personnel are also actively pursued for their input to classroom topics. Retail placement activities, day on the job programs, and career counselling are all additional ways in which active retailer participation in campus activities is encouraged. An internship program is in the planning stages.

An effort is made to feature innovative and experimental classroom activities throughout the retail program. For example, one activity which is especially effective features role playing and simulations to focus on important facets of the retail buyer's role. Other effective exercises involve role playing of the retail sales position, buyer-vendor relationships, and "personnel" matters. Some of these are videotaped and are very effective learning tools. Case studies are also used to supplement classroom activities. A locational case we are developing, for example, has been used with a subsequent visit by retail management of the featured firm to discuss the resolution/issues as they actually went through them.

### Conclusion

The above applications are illustrative of some possible ways in which the existing gap in retail education may eventually be resolved. The intent of this paper has largely been to stimulate thought and debate about the nature of retail education as it is perceived and carried out in four-year programs. Hopefully, the end result may be more effective, stimulating, and relevant retail course offerings.

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THE DEVIANT CONSUMER:  
PROBLEMS, PROSPECTS, AND PRIORITIES FOR MANAGEMENT ACTION  
AND MARKETING RESEARCH

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Abstract

Deviant consumer behavior is approaching epidemic proportions, yet has received little research attention. Several problems inherent in the area have impeded both management action and research progress. This paper reviews these problems and suggests priorities for both management action and future research.

Introduction

Deviant consumer behavior may be defined as behavior in a marketing context that society considers inappropriate, illegal or in conflict with previously accepted societal norms. Some examples include shoplifting and other pilferage, price altering, destroying or damaging merchandise, marring instore fixtures or restrooms, writing of "bad" checks, consumer fraud, and the like. Such behavior is rampant and is on the increase. Yet, little marketing research has been devoted to this issue (see Mills, 1979 for a review of studies in the area).

Problems For Research In The Area

That comparatively little research attention has been paid to this area by marketing scholars perhaps may be illustrative of several problems including (1) lack of adequate conceptual frameworks, (2) ethical and legal issues, and (3) special methodological research problems.

Lack of Adequate Conceptual Frameworks

With the exception of some recent pioneering work (Mills, 1979), most consumer deviance studies have suffered from the lack of an actionable theoretical base. Thus, more conceptual work and empirical tests need to be done to guide research in the area.

Ethical and Legal Problems

The rather sensitive nature of deviant consumer behavior also makes for a number of potential research design problems. While it is possible to design an experimental study to capture or reveal deviant offenders, for example, the ethical aspects are not so clear-cut. A field study of deviant consumers may also represent considerable ethical considerations for the researcher (e.g., Humphreys, 1970), as may various legal considerations.

Special Methodological Research Problems

Several special methodological questions must often also be dealt with. For example, what is the appropriate sampling frame? Should one utilize apprehended offenders (admittedly a very biased sample) or a more generalized sample? Utilizing self-reported deviants appears to offer a reasonable approach, although this and more projective methodologies are admittedly rather "soft". Some researchers (e.g., Geurts, et. al., 1975) have attempted to utilize the randomized response design to good effect. However, this approach has several drawbacks.

Problems for Management Action

Management of affected businesses are also faced with a number of problems. These include problems of an economic nature, lack of a mechanism allowing for coordinated investigations of apprehended deviant offenders, the legal and social aspects of dealing with consumer deviants and the irritation and anxiety of customers due to stringent security procedures. These problems have severely hampered management action in this area.

Priorities for Management Action  
and Marketing Research

Several priorities exist, then, for both managerial action and for marketing research. Critically important are studies which shed further light on the motivational aspects underlying the deviant consumer behavior problem, especially as this may differ for different demographic or socioeconomic groups. Additionally, further research attention must be directed towards the interaction between the store environment and the individual as this is reflected in consumer deviance. Additional attention must also be directed toward determining the most effective methods for alleviating deviant consumer behavior. Coordinated management action and cooperative efforts between affected businesses are also of primary importance, as are more attempts at public relations and other consumer-oriented activities.

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## RETAILING IN THE 1980's: A BUYER'S PERSPECTIVE

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### Abstract

This research is an attempt to apply strategic market planning in a retail environment. As used in the research, strategic market planning is the planning process which begins with formal evaluation of the organization's mission and its goals, continues with analyses of the internal situation and external or macroenvironmental forces, competition, opportunities, and selection of strategies from alternatives corresponding to different business situation scenarios (Channon and Jalland, 1978). The process concludes with development of specific strategies, tactics for accomplishing the objectives, budgeting, implementation and procedures for monitoring and control. Plans are prepared under a strategic framework which views the firm's offerings as a balanced portfolio, with each offering in its own life cycle stage.

### Introduction

Outdoor Sports Supply (OSS)--name disguised--is a major Northwest retailer of selected outdoor sports clothing, equipment and supplies. Its product mix includes down-filled outer wear manufactured by OSS, and an assortment of name-brand equipment for individual, "muscle-powered" sports such as hiking and mountaineering, cross-country and downhill skiing, camping, canoeing and bicycle racing. A recent addition to the mix was fashion goods for spectator sports and outdoor living. For most of its history, OSS sold only through an annual catalog or from a single sprawling store in partially renovated warehouses in the center of a major Northwest city. The past five years have seen an expansion into seven new market areas with new stores located from Alaska to California. Plans to continue the expansion eastward as far as Chicago have been scrapped. Sales in 1979 were approximately \$46 million. The store is organized as a member-owned cooperative.

Difficulties with the expansion philosophy surfaced in 1979, when for the first time in its nearly 50-year history, OSS failed to meet its dividend commitment to refund ten percent of the value of goods purchased to its members. The following reasons were cited for the failure:

1. Increased "on sale" promotion which "caused" higher than expected markdowns
2. Inconsistent in-stock condition
3. High interest rates
4. Opening of two new stores
5. Double-digit inflation
6. Lower value of the dollar in foreign markets

### Planning at OSS

Planning at OSS has consisted of what Lorange and Vancil (1977) identify as a "one-cycle" process: Preparation of sales forecasts and annual budgets. Until its recent shelving, a long-range new store locating plan augmented the annual plan. While the firm has employed optical scanning registers for several years, no attempt has been made to apply the equipment into an economic order quantity or open-to-buy system. A new computer was purchased in 1979, replacing time-share services purchased from outside.

First phase of the research was to evaluate the firm's existing planning processes, merchandising policy and control systems. Not surprisingly, no comprehensive merchandising policy or coordinated planning/control system was found. Individual buyers (buying for all stores is carried out from a single central location; twenty buyers are employed) are responsible for their own product lines, including stocking, display and sales. No formal sales training program exists.

The next step in the research is to conduct an image and positioning study (the organization's first) as background for helping the firm to define its business mission and goals, identify major competitors and potential opportunities. Ultimate goal of the project is to introduce a system of strategic market planning into the firm. This will include identifying appropriate product lines or markets served as "business units," (Abel and Hammond, 1979) and anticipatory contingency planning to help the firm better compete in its changing market and environment (Bates, 1976).

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FRENCH STUDENTS' PERCEPTION OF SUCCESS  
CRITERIA IN A MARKETING CAREER

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Abstract

This paper gives results of a survey aiming at determining French students' perception of criteria requested for a successful career in marketing. The research involved 67 French students enrolled in an undergraduate program. Data were gathered using the Nominal Group Technique. Results indicated students thought that criteria based on individual qualities such as dynamism and creativeness, were the most important.

Introduction

Marketing education has been gaining an increasing interest since the last decade and according to Keith K. Cox (1980) the 1979-80, President of The American Marketing Association, this rather recent concern is most likely to continue.

Literature and research focusing on Marketing Education have been dealing with Marketing courses content and pedagogy such as, for instance, methods of teaching Pricing Theory (Beal, 1979) or considerations on the usage of multiple choice questions in Marketing exams (Mc Millan 1979). Another research body mainly concerns student/people reactions to Marketing education; studies on hiring criteria fall into this category (Hafer and Hoth, 1980).

The former received much more attention than the latter. This situation is easy to understand. Overall Marketing educators are interested in getting in-depth knowledge of pedagogic tools in order to improve their ability and quality of teaching. Yet, it should be stressed that knowledge of students' reactions to marketing education might be interpreted as a pragmatic evaluation of the education they received.

Bearing this in mind, we found interesting to identify French students' perception of success criteria in a Marketing career. These criteria might have a direct effect on the potential misapprehension they would face in their first job. Moreover, as we stated earlier, the nature of these criteria and possible discrepancy with actual criteria of success might be interpreted as a sanction on the education students received.

Furthermore, by knowing what students think are criteria to succeed in a Marketing position, educators might adjust their course contents to any potential discrepancy with actual criteria of success. Therefore, these criteria may be seen as inputs as well as outputs for Marketing education.

Yet, it must be pointed out that other intervening variables might originate those criteria. Among them, let us mention students' experience in Marketing practices. Through previous full-time or even part-time jobs, students develop beliefs. Many French institutions recommend their students to have a summer job in business administration to get a feeling of the "real world". No doubt that, at least by watching marketers, they should get a better idea what qualities and knowledge are necessary. The personality of a student itself also influences these criteria: the way he sees and understands his professional life, for instance, are intervening variables. Finally interactions with

others (friends, family) might also influence the nature of those criteria.

The research

Methodology

The exploratory nature of this research required using group interviews.

Unfortunately, conventional methods of group interviews suffered from two major constraints regarding our problem:

1. They would give nominal results. It was far from being obvious that we would have been able to get rank-ordered criteria. Yet, ordinal data would have been particularly relevant to the problem in hand.
2. Nature of the problem and characteristics of respondents (i.e. students knowing themselves) could have caused a biased set of criteria as some more active people (leaders) would possibly influence others.

Bearing these two constraints in mind, we decided to use the Nominal Group Technique (N.G.T.) (Delbecq, Van den Andrew, Gustafson, 1975).

The sample consisted in 67 Marketing students enrolled in an undergraduate program at the Institut Universitaire de Technologie - Besançon (France). All of them were in the final term of their studies, which meant they should have been concerned with their first job and that they all had completed several marketing courses. Consequently, the model we developed earlier in this text was relevant to them. Respondents were divided into groups of, on average, 12 people. They were presented with the following question: "What are the relevant criteria to succeed in a Marketing career?" In order to clarify the question, students were presented with two classified ads sampled from L'Express, a French national executive magazine.

Results

On an aggregate basis, 46 different criteria were recorded. This rather large number depicted a diversity among the students' perception.

Among these main criteria, from the number of points they received, two emerged: Dynamism and Creativeness. Interestingly enough, such criteria are linked to individual qualities and not to the marketing education students received. The first criteria referring to marketing education ranked only fourth. In a second step, we tried to form groups of criteria among the original 46. A careful analysis of these individual criteria resulted in identification of three main categories:

- Individual qualities
- Intellectual Skills
- Education

end of the text available upon request from the authors.

## MARKETING AND THE NEW WOMAN

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### Abstract

Marketers today should re-evaluate their strategy in light of new information regarding the career-oriented woman. The potential market which lies in this emerging segment of the American work force is yet to be realized. Some of what is known about the "new woman" is presented in this paper.

### Introduction

Today's new woman has emerged into our society as a confident, self-reliant human being. She is more totally aware of herself socially, sexually, economically, and politically. As a working woman she is a predictable percentage of our total work force and has a measurable impact on our Gross National Product. If we look at her as the professional woman, we find that she differs significantly from housewives and women with non-professional jobs, in terms of a variety of shopping attitudes, activities, and behaviors. The terminology of housewifery can no longer have the meaning it once had. The previous categorization of men and women into distinctive roles for marketing purposes is becoming less feasible. Men and women no longer differ so dramatically and thus are becoming more difficult to target.

It is important to look at a strong contributing factor that has increased woman's presence in the work force, namely the rejuvenation of the women's movement. The suffragette centered her efforts on the right to vote and her efforts crested with the passage of the 19th Amendment. The working woman emerged from conditions created by World War I. She was forged and tempered in World War II and then shaped in the social turbulence of the 1950's and 1960's. The early seventies brought about a new feminine leadership and the Equal Rights Amendment became a major political issue in the country.

### Women Are Millionaires Too

There is a movement underway, the purpose of which is consciousness raising on the part of women in American society. A feeling of solidarity with other women has given many modern day women the courage to rebel against their life situation. These new women are a powerful economic force in our country today. By the mid-seventies women owned almost 50 percent of the total cash and corporate stock as well as more than 50 percent of all bonds. Merrill Lynch calculates that 50.4 percent of America's millionaires are women. It is predicted that women will continue to go to work at an unprecedented rate: 50.3 percent of the work force by 1985, and 51.4 percent by 1990. The Bureau of Labor Statistics predicts that by 1985 more than half of all women 16 years of age and over will be in the work force. These staggering statistics should demonstrate that women are serious about their attempts to prove themselves in the "man's world". Many women are working not just to get away from the limitations and drudgery of the household, but because of a sense of professional achievement and personal satisfaction that career-oriented men have always known. Work is a way for women to establish themselves and find identities of their own. We find this trend most evident among better educated, younger women. Whether a woman is married, single, or separated, the more education she has, the more likely she is to work. Two out of three women with

five or more years of college are working full time.

Available information about the increased participation of women in selected professions and the enrollment of women in graduate and professional schools suggests that this group has potential for even further growth. A study done by Professor Eugene Jennings, a professor of Management at Michigan State University, indicated that younger women, those five to seven years out of college, are much better equipped to reach the top in major industrial corporations than the older group that received a subdued thrust forward in the 1970's because of the mood of the times. Professor Jennings found that few of these women who were thrust into management positions in the 1970's were really aiming for the top and few were equipped by work experience to maintain the momentum. The reason the younger women are different is that corporations are not taking the same shortcuts with them. They are getting a broad base of experience and are given no breaks. The survivors will be prepared to assume presidencies.

Three clearly defined characteristic types of working women he identified are:

1. The career-centered woman who defines her own goals and strategy rather than permitting the company to make them for her. She assumes responsibility for making her career successful.
2. The opportunity-oriented woman who is prepared to do whatever is assigned...to take any opportunity that comes her way. Unlike the career-oriented type who will move to obtain a better job, the opportunist will take a job just to move.
3. The self-immobilized woman who is content in her present job and would like to make a career of it.

According to his findings, in the years ahead, the younger group of women executives will tend to be far more career-centered than their older sisters. Women all over the world have started their move for new social status, economic footholds, higher education, and political power. Because of these forward moving drives of today's women, marketers must further their efforts to focus on them as a major new consumer force. Therefore, from a consumer point of view in general, and from a fashion point of view in particular, the purpose of this paper is to focus on the marketing needs of the new working woman.

References will be furnished upon request.

THE NEXT FIFTY YEARS FOR MARKETING  
IN LATIN AMERICA: PROSPECTS,  
DEVELOPMENTS, AND PREDICTIONS

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The purpose of this study is to forecast the likely future development of the marketing environment and marketing institutions of Latin America. The specific research objectives are to: (1) Identify the key factors or characteristics contributing to the development of the marketing environment in Latin America; (2) Establish the most probable time period in which these characteristics will be operative; and (3) Identify the major obstacles inhibiting the realization of these characteristics.

The information on which the analysis of the research questions is based was obtained from a modified version of the Delphi survey technique. The study successfully completed two rounds of questioning conducted among a group of 30 cooperating experts. The panel of experts was drawn from eight countries of North and South America and contained both published academics and businessmen with specialized knowledge of Latin American marketing. Twenty-four of the thirty participants are either university professors or former educators turned businessmen. Consequently, the view of the future presented in these results comes primarily from the "ivory tower," even though most participants are active in business and consulting.

The survey instrument designed for the first round consisted of 14 characteristics or "states of nature" thought to be critical to the future development of the Latin American marketing environment. Each "state of nature" contained scenario statements describing potential developments in the macro-environment of marketing. The participants were asked to indicate the probability of each characteristic existing in each of several future time periods. Participants were also asked in an open-ended question to identify the major obstacles inhibiting the achievement of each state of nature.

First round results indicated the need to view Latin America regionally, rather than as a homogeneous area. Thus, for the second round, responses were requested separately for three major areas: the Central American Common Market (CACM), the Andean Group, and Brazil. Finally, results of the first round were returned to participants and they were asked to re-evaluate their responses in light of the additional information obtained.

Second round results reveals that the overall judgment of the respondents is that the decade of the 80's is likely to be a period of especially rapid change for marketing environments and institutions in Latin America. The average responses of the panel for all seven scenarios taken together indicate that their cumulative probability estimate of the scenarios occurring by 1990 is well over 50 percent. Further, the greatest increases in cumulative probability take place between the base year and 1990. The increases in cumulative probability are all greater between 1979 and 1990 than between 1990 and 2025. Although this may reflect a forecasting bias to concentrate on the near run future, the overall indication is one of rapid change in the next decade.

Conclusions on the basis of this survey information must be considered with several limitations in mind. First, all forecasts of the future represent subjective and highly probabilistic individual judgements. Although the Delphi technique may have contributed to more considered evaluations by providing the responses of other experts as input into final predictions, the overall reliability of any forecasting technique, especially for periods outside the immediate future, is necessarily less than perfect. Thus, these results can best be interpreted as suggestions of likely trends rather than definitive conclusions. Secondly, the size of the panel was relatively small and may not be completely representative of all expert opinion at a statistically significant level.

These limits notwithstanding, three central conclusions seem reasonable based on the results. First, the overall forecast of marketing's contribution to economic development seems optimistic. The attainment of some specific marketing situations which contribute to economic development seems highly likely by 2025. Further, in some cases high probabilities occur in the near future.

Second, substantial variation by regions in Latin America is noted. Probabilities for Brazil consistently start higher and increase to higher levels than probabilities for the Andean Group and CACM. This underscores the necessity of treating any approach to economic development in Latin America at least on a regional, and not global, basis.

Finally, survey results suggest some priorities for economic development programs and research. Depending on the strategy selected efforts could be directed to those situations offering the highest probability of occurrence in the near run future with the thought of attacking areas offering the greatest likelihood of quick results. Alternatively, efforts could be directed to situations presenting the greatest obstacles, and hence lowest probabilities of occurrence.

# A STUDY OF CONSUMER PERCEPTION OF THE SERVICE/PRODUCER UNITY CONCEPT

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## Abstract

This paper considers consumer behavior relative to the service characteristics of inseparability between the services and its producer.

Indeed, the non-mechanized service and its producer are one, because of the creative content of many, if not all, types of personal services. One may expect the consumer to survey alternative sources of services, carefully considering the ability of the source's service producers because of the creative content of the service.

The setting for this study utilized 166 graduate and undergraduate business students in attendance at the first summer session of 1980 at St. John's University, an urban institution. All students commute to school; there are no dormitory facilities. Furthermore, most graduate students are employed full-time, and attend only evening classes.

The operational procedure involved the distribution of a simple questionnaire of three questions. The intent of the questions was to find how much the consumers believed that service producers contributed to consumer satisfaction; how the consumers employed this attitude; and whether the consumers' perceptions of the role of the service producer changed over time. Accordingly, a before-and-after framework was attempted through the wording of the questions. Comparing the differences between the preference ratings given to each answer choice within the time framework measures the influence of time and experience on consumer perceptions.

The hypotheses tested were:

1. Faculty skill or reputation is the most important factor assumed by a consumer of an educational service to provide the overall satisfaction he seeks, when planning such a purchase.
2. Faculty skill or reputation is the most important determinant of student satisfaction while in attendance at the educational institution.
3. Experienced consumers of an educational service value the skill of the service producers more highly than do the less experienced consumers.

### A. Before

Both groups of respondents expected the program of courses offered to provide the greatest satisfaction sought. However, 77% of the experienced consumers ranked the program most highly compared to only 58% of the less experienced.

Of the less experienced consumers, almost as many (54%) ranked accreditation most highly as an anticipated satisfaction factor. This is an important point as accreditation appears to be an objective information factor from a source beyond the control of the service marketer. An objective symbol of all things intangible about the education service, i.e., the promise of satisfaction, faculty reputation and skill, surrogates such as this should be expected to be a valuable decision influence on the inexperienced consumer. A recommendation from an objective source, it guides the choice of the inexperienced. However, the graduate students also consid-

ered accreditation important, although in third place after convenient location.

Convenient location received high rankings by both groups, as might be expected among a commuting student body. While ranked a distant second among graduate students, its third place rating among undergraduates (49%) was higher than the graduate rating of 47%. Clearly, inexperienced consumers have a different scale of values than the experienced.

Few of each group expected that the satisfaction sought would be provided by the service producers. With the average of the "most" ratings at 35%, faculty ratings were about 25% below average.

### B. After

It appears that Hypothesis 2 is proven negatively. The program of courses is perceived by both groups as still contributing most to consumer satisfaction, but there are interesting changes in the second and third place choices.

Accreditation's importance declined by 30% among the undergraduates, and increased slightly among the graduate students. The former change can be explained as reflecting the changed situation of the respondents, from prospective purchasers to active consumers. Therefore, the relevance of this aid to his confidence need is diminished.

The importance of the service producers continues to be low rated, in the "after" portion of the study. But this appearance is belied by the magnitude of the percent change in the before-and-after ratings assigned to faculty reputation and faculty skill. An Exhibit shows that the more experienced consumers (graduate students) increased their awareness of the importance of producer skills by 71%. The less experienced undergraduates raised their assessment of the importance of faculty skill by 24%, and of faculty reputation by 17%. The magnitude of these changes is impressive.

## Conclusion

The major conclusion to be drawn is that very few consumers of an educational service perceive, or are influenced by, the unity that exists between the service and its producers, regardless of their prior experience. However, while consumers are in the act of consuming the service, the recognition grows of the importance of the service performers' skill as a major factor in producing the satisfaction that the consumer seeks.

RESPONSE AND ITEM OMISSION RATES FOR FORMAT  
JUSTIFIED QUESTIONNAIRES

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Abstract

This research examined the impact of a directed questionnaire on overall response rate and item omission rates. The results indicated that a directed questionnaire format did not improve results in either case.

The Study

During the past forty-nine years much research activity has been directed toward the investigation of methods to increase the response rate to mail questionnaires. Numerous strategies have been employed to boost the response rate. Some of the strategies have produced promising results, while many others have failed to aid the problem (Kanuk, 1975; Pressley, 1978; Roscoe 1975). In short, much work still needs to be done on the improvement of the response rate to mail questionnaires.

One common reason suggested for the failure of sample members to respond to the questionnaire is the lack of knowledge on the expected usage of the data that they have been requested to supply. The assumption is that sample members may tend to be reluctant to supply information when they can not see a reason why the information is needed. Consequently, these authors of this paper hypothesized that beneficial results could surface if the sample members were supplied with a justification for the inclusion of the questions. An example of such a justification format, henceforth to be called a directed questionnaire is: "The question below is aimed at finding out the proportion of people that use each of the financial institutions mentioned." It was felt that supplying reasons for the inclusion of the questions would not only increase the overall response rate to the questionnaire, but would reduce the number of questions that respondents leave unanswered (item omission rate).

The sample for this study consisted of 3700 respondents drawn from telephone directories of four midwestern towns. Approximately one half of the net sample received a directed questionnaire and one-half a non-directed questionnaire. The directed questionnaire was about one and one-half pages longer than the non-directed questionnaire. The types of questions and included likert, semantic differential, multichotomous and open ended. No incentives or advanced or follow up letters were used.

The following are the research hypothesis for the study.

$H_{01}$ : There is no difference in overall response rates for questionnaires using a directed question format and of a questionnaire more traditional format.

$H_{02}$ : There is no difference in the mean item non-response rates for questionnaires using a directed question format and for questionnaires using a more traditional format.

Results and Implications

The results of the study indicated that the group receiving the directed questionnaire had a 1.4 percent lower response rate (455 for directed and 476 for traditional). The hypothesis test for differences between the two proportions was judged to produce in-

significant results ( $p = .35$ ). The proportion of items omitted averaged 8.6 per questionnaire for the directed and 9.3 for the traditional questionnaires. The hypothesis test for differences between the two proportions was judged to produce insignificant results, ( $p = .71$ )

Researchers desiring to increase the response rate to one of their mail surveys would apparently be ill advised to use a directed questionnaire format. However, if the researcher's objective is to obtain more answers to confidential questions, then the directed questionnaire may be the appropriate vehicle for some audiences.

The use of a directed questionnaire will increase costs considerably. This increase is due to additional mailing and handling costs caused by the larger size and the added costs of developing a more involved questionnaire. Thus, researchers desiring to obtain hard to get information may find that more can be obtained by using a directed questionnaire, but they must ask themselves if the information is worth the added costs and effort.

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## RESPONSE QUALITY OF CONFIDENTIAL AND COMPLEX QUESTIONS

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John H. Summey, Southern Illinois University

### Abstract

This paper deals with the item omission rate that is associated with complex and confidential questions on mail surveys. The study finds that complex questions were not omitted more frequently than any other question. Confidential questions were found to be omitted more frequently.

### Introduction

In mail survey research, the issue of response rates has received much research effort, while the item omission rate issue has been practically neglected (Houston and Ford, 1976). The issue of item omission rate has posed even bigger problems for certain types of questions. More specifically, complex and confidential questions have often been suggested as yielding greater numbers of omitted answers (Erdos, 1970). While the item omission rate associated with confidential (sensitive) questions has often been studied as a function of anonymity (Futrell and Swan, 1977), researchers have neglected to investigate whether or not confidential questions are omitted more often than non-confidential questions. Another void in the literature deals with whether or no complex questions are omitted more frequently than non-complex questions.

The objective of this study is two-fold. First, determining whether or not complex questions produce higher item omission rates than do non-complex questions. Second, whether or not confidential questions are more frequently left unanswered than are non-confidential questions.

### Methodology

A nationwide sample of 1,108 service dealers was randomly chosen from a master list provided by an electronic manufacturing firm. Nine questionnaires were returned as undeliverable for a net mailing of 1,099. A total of 348 useable returns were received for a response rate of 31.7 percent. None of the service dealers received prior notification of their selection for the sample. Each respondent received the questionnaire along with a pre-addressed, stamped return envelope. Follow up letters, which included a copy of the questionnaire and a stamped, return envelope, were mailed two weeks after the original mailing. No incentive was used in conjunction with the mailings.

Due to the confidential nature of some of the information sought anonymity was an issue stressed in the cover letter. Respondents were reminded to maintain their anonymity by not including their return address and by reviewing their responses to some of the short answers questions to insure that they did not name their company. In general, the questionnaire was very detailed. Of the fourteen questions, several required numerous responses, while others involved choices from involved lists. The average completion time during pretest situations was over an hour. A panel was asked to judge the questionnaire in order to determine the complexity and confidentiality of each question. Three of the questions were judged to be complex. The three complex questions were: a question that required 72 responses; one that

required 48 responses; and an involved essay question. Three questions were deemed to be confidential, as they respectively dealt with the sales of the respondent's company, the company's legal structure, and the respondent's judgment of the performance of the industrial distributors who serve the company.

In order to develop the data for testing the hypothesis each returned questionnaire was examined and totals developed for item omissions on each question. These data were then examined using the Mann-Whitney U test. The tests involved comparing the item omissions on complex and confidential questions to item omission rates on the non-complex and non-confidential questions.

### Findings

The use of the Mann-Whitney U test to examine the overall effect of complexity of the questions on item omission rates produced a statistically significant result ( $U=4, p=.05$ ). This result indicated that the complexity of the question tended not to effect item omission rates. The overall effect of question confidentiality was found to be a statistically significant increase in the item omission rate ( $U=7, p=.05$ ), i.e. confidential questions tended to be omitted more frequently.

### Discussion

This study partially supports the opinions of noted mail survey authorities in that certain types of questions will more frequently suffer from more omitted answers (Erdos, 1970). In this case, confidential questions were found to be omitted more frequently. With confidential questions, anonymity is an obvious concern. Respondents are unlikely to answer any question to which they feel their answers could later cause problems, i.e. reveal a sensitive issue such as income or their opinions about people. The issue of anonymity was held constant in this study, in hopes that the effect of anonymity would be relatively constant across all questions. In short, researchers may assume that because of the anonymity issue, that confidential questions will probably produce a higher omission rate on answers. Complex questions were not found to produce a higher frequency of answer omission. This finding is surprising. Researchers have hypothesized for sometime that more complex questions would be more likely to be left blank due to the extra effort involved for the respondents. Apparently the effort involved in answering a question may not have much of an effect on the probability that the question will be answered.

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A SEGMENTATION APPROACH TO THE MEXICAN-AMERICAN MARKET

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Abstract

Marketing discipline has ignored for a long time the Mexican-American consumer in spite of his growing importance. The paper describes a marketing research study of the Mexican-American community in the Los Angeles area. The results showed that Mexican-Americans are not a unique market, but a composite of heterogeneous market segments.

Introduction

Until now, marketing scholars and marketing firms rarely or never have touched the subject of the Mexican-American consumer as a potential market for products and services. They are estimated, together with the rest of the Hispanic population in the U.S., to be 12 million (5.3% of the American population). Of the officially recognized Hispanics, the largest single group are the Mexican-Americans (or Chicanos), comprising 60% of the Hispanic group (Time, 1978).

The figure of 12 million does not include illegal aliens, which conservatively could be estimated at 7 million. Therefore, the estimated total Hispanic population is 19 million or 9% of the total population in the U.S. Comparatively, blacks are 12% of the national figure, but they have received well-covered attention by marketing researchers.

The study presented here deals with a marketing research study among Chicanos in the city of Los Angeles, Cal. Such project was funded by several companies located in Mexico City, who were very interested in the Chicano consumer.

Methodology

The marketing research project in L.A. was actually two different studies. One was a focus group and the other a house interview survey. A total of 250 interviews were completed and processed. The questionnaire contained 37 questions that covered attitudinal information about products made in Mexico, consumer habits, and reasons for preferring certain Mexican products over American products.

The focus group study was initiated after the house interviews were completed. Two sessions were organized in different typical barrios of L.A. The reclusants were males between 25-35 years. The discussion was around the idea of quality of the Mexican imports. Sessions were tape-recorded and carried out in Spanish or English, depending on the preference of the respondent.

Findings

The Structure of the Market

One of the major findings of the research is that there is not such a thing as a unique or homogeneous market. Not only are Mexican-Americans sharply different from the general population by almost every demographic and socioeconomic measure, but they also differ among themselves. It is very likely that a Chicano living in California is very different from one living in Texas or New Mexico.

Derived in part from our findings and also from the sociological literature (Burma, 1970 and Grebler, 1970),

we were able to establish the Mexican-American market as a pyramid structure with four main strata: the base of the pyramid is composed of recent immigrants and illegal aliens, who are the worst off, economically speaking, of all the groups. They are the least acculturated and they speak almost exclusively Spanish.

There is no exact figure about illegal Mexican immigration and we can only guess on this respect. However, a conservative figure of 7 million is not far from reality (Moore, 1976). If we add this figure to the legal immigration, the percentage of foreign-born may be as high as 60-65% of the Mexican-American population.

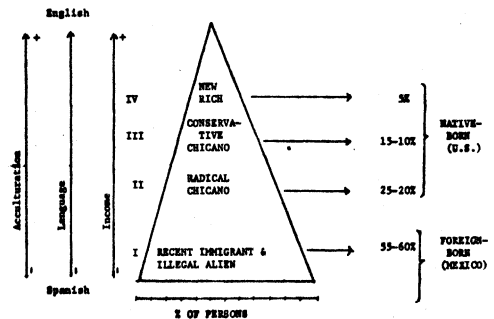
The second stratum is called the "Radical Chicano". They are native-born Americans, but still have very close feelings about Mexican traditions. It is a very politicized group that sees no alternative to self-improvement except apartness and fighting back with the institutional and political weapons of the American system. Even though that they are in the process of acculturation, they speak English intermixed with Spanish. We consider this group to be about 20 to 25% of the Chicano community.

The third segment of the pyramid is called "Conservative Chicanos." They are also native-born Americans, who are beginning to lose some of the Mexican ties. The achievement of this group has been much greater than the other two groups, due to more years of school, including some years of college. They feel more comfortable speaking English, although Spanish still might be spoken with their parents. We estimate this segment to be 10-15% of the Chicano community.

Finally, the fourth segment of the Chicano population are called the "New Rich" because they are at the top of the socioeconomic ladder. Even though they might not be rich in absolute terms, they have achieved a position that resembles the middle- or upper-middle class families in the U.S. The acculturation seems to be total and they are likely to marry outside the ethnic community with native Anglos and move out of the barrio. The "New Rich" generation might be only 5% or less of the total Mexican-Americans (see Exhibit 1).

EXHIBIT 1

SEGMENTS OF THE MEXICAN-AMERICAN MARKET



- Notes:
1. In reality these strata overlap each other rather than being closed groups.
  2. The percentages are estimates.

The pyramid shown in Exhibit 1 is not a clear cut segmentation, and the suggested percentages are only estimates derived from our study and the literature review.

The main aspect we want to show here is the process of assimilation of the different segments of the Mexican-American population. It is this diversity that makes any characterization of Chicanos so extremely difficult.

#### Image of the Products Made in Mexico

It was found that 85% of the respondents said that the quality of Mexican-made products is good or excellent. They said Mexican imports have "craftmanship" while U.S. products are mass produced. Mexican foods and beverages, they feel, are natural while American products contain chemicals.

If Chicanos buy U.S. products, it is due to their low incomes (imports are usually more expensive). They prefer to give their money to Mexican firms so as to create new jobs, rather than help Anglo firms. In summary, Chicanos distrust, and feel cheated by many U.S. companies.

In relation to mass media, Mexican-Americans watch American TV programs, listen to English speaking radio programs, and read American newspapers just as much as the Spanish mass media.

#### Conclusions and Future Outlook

While American blacks are constantly discovered by marketing firms in the U.S., Mexican-Americans remain a forgotten minority, in spite of the fact they are now the second largest minority in the country. Politicians and even Presidents have looked for the Chicano support. There is no doubt that Mexican-Americans as well as other Hispanics will play an important role in shaping the nation's politics and policies (Time, 1978).

We cannot neglect the existence of at least 12 million of Mexican-Americans in different process of acculturation, but who live and consume products every day in the United States.

Mexican firms have discovered a very important market for their products. American firms may be lagging behind in their effort to capture this market.

We assume that the lack of marketing research information about this community is one of the biggest problems that it is confronted to understand this market. Even important marketing research bureaus such as A.C. Nielsen and American Research Bureau tend to ignore the preference of Mexican-American consumers. These companies select their daily keeping sample of households from telephone directories, a practice that tends to exclude minority responses, because they have a disproportionate number of unlisted telephones or, perhaps, have no telephone service at all (Moore, 1976).

Another problem we have found is the false stereotype given by the mass media, which portrays the Mexican-Americans as lazy and dull (Martinez, 1973). Some entrepreneurs think that it is not worth to sell to this market. We might call this a new "majority falacy" (Kuen and Day, 1962). American firms are concentrated in larger segments (or wealthier groups), where there is hypercompetition, which might turn out to be less profitable than smaller segments of the market, such as the Mexican-Americans.

Firms that first show interest in this minority would probably gain their patronage.

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## POSITIONING: SOME CONCEPTUAL OBSERVATIONS WITH AN ILLUSTRATION.

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### Topic

This paper is concerned with the concept of positioning in the marketing management decisionmaking environment and with the alternative approaches to positioning.

### Purpose

The purpose of this paper is, then, to study the positioning concept both from a theoretical and from a practical point of view. This is carried out by a) reviewing the literature, whereafter b) a synthesis of the concept is attempted to, and c) a clarification followed by an illustration of the concept and its application in a market research problem situation is presented.

### Problem

The concept of positioning does not seem to be an establish one as to its exact meaning nor to its boundaries in the marketing literature. We feel it is worthwhile to discuss the concept itself, the central variables and the various approaches associated with it.

Therefore, the objectives of the study are to review the literature in order to show some of the contradictions as to the concept's meaning and content, and to identify the variables of importance; describe the various alternative approaches to positioning and to clarify this with an example of an ongoing research the authors are about to complete.

### Review of Literature

The concept was perceived as a gimmick and not very different from the product differentiation concept in its first stage of development. It was regarded as a strategy of either of a) internal, i.e. product line oriented nature or b) of external i.e. consumer oriented nature (see Trout 69, Trout and Ries 72, and Greenberg 72).

These authors used such terms as "company image positioning", "positioning within the prospects mind" and "master plan positioning" to stress the importance of product image as the central variable of interest.

Others (see Ogilvy 75, Home 75, Raula 77, Wademan 76, Achenbaum 74, Ries 74, and Wasem 77) used the concept in relation with advertising and defined it as an advertising dependent strategy, or technique, to relate the product identity in the minds of the prospective buyers.

The next stage of development of positioning thought (see Warwick and Sand 75, Wademan 76, and Maggard 76) added the competitive aspect and stressed that positioning is a tool to differentiate between one company's product from other's. McIntyre introduced the aspect of measurement approach by stating that it was imperative to know what consumers think of a product and how it would be perceived vis-a-vis major competitors. Actually psychometricians, and in marketing Neidell 69, Green et al introduced the measurement approach to positioning in marketing literature, but their point of view was that of developing new effective techniques into the marketing research problems, and the conceptual side of positioning was a sideline.

Product positioning was seen to refer to a brand's objective attributes in relation to other brands. Lancaster's terminology (Lancaster 66) had a profound effect on the development of the concept. According to Lancaster, the consumer was seen to choose also on the basis of subjective and perceived attributes.

Position refers to a product's subjective attributes in relation to competing products. This perceived image of the brand belongs not only to the product, but rather is the property of the consumer's mental perception and, in some instances, could differ widely from a brand's true physical (objective) characteristics.

A brand may have at least two different positions; one, the product position which is based on the objective characteristics in relation to competing brands, and, two, the product position as perceived by consumers along the subjective characteristics in relation to competing brands.

Among the more recent researchers (see Hughes 79, Green and Tull 78, Doyle 77, Hooley 79, Hauser and Koppelman 79, Huber and Helbrook 79, and Wilkes 77) a strong measurement orientation is introduced into the positioning literature.

The fundamental treatment of this "school" of thought is the following line of reasoning; when a product/service/idea is chosen by the consumer, the attributes (both objective and subjective) of the available products are evaluated in terms of the consumer's set of needs.

The way the brand is perceived in relation to his needs is directly connected with brand preference and indirectly with the market share of the brand. Therefore, it must be one of the central needs of a marketing manager to know the comparative position of his product or product line.

In order to satisfy this central need of management one must be able to measure the perceptions related with the various attributes in the competitive space. The above mentioned writers tend to define positioning totally from the measurement point of view, so that five approaches to positioning are enumerated (Nicosia and Tull) 1. multidimensional scaling (mds) positioning based on similarity of brands, 2. mds positioning based on brand's position on various product attributes, 3. mds positioning based on brand's position on the relevant dimensions, 4. mds positioning based on both perceptions and preferences, and 5. conjoint measurement.

Thus one may distinguish several stages in the development of the concept. These stages are:

1. The "image profile" concept of advertisers or researchers in the advertising field that regard positioning as an advertising dependent strategy. Their approach is more or less intuitive.
2. The "tool of differentiation" approach that regards positioning as a means of differentiating a product from the competing products.

3. The "measurement" approach of those who apply multivariate methods - most often multidimensional scaling and conjoint measurement - in defining the product positions and the relevant dimensions.

When an attempt to draw together the somewhat contradictory approaches is made, the first impression is that one deals with a typical development scenario of a concept in marketing. First, it seems as if a new label was given to old thinking, but after the test of time, the concept is slowly accepted.

If marketing is defined as the interface between an organization and its markets, positioning should be seen as the process that gives direction towards the target markets in the competitive environment to that interface process. In its directive capacity, the process is of strategic importance. Therefore, it is incorrect to regard it as only a tool, or only of tactical value.

What were then the dependent variables of the various approaches? Image profiles were the concern of the first stage of the development. The image an advertisement created in the consumer's mind explained the choice of a product. The second approach "the tool of differentiation" added the comparative aspect i.e. the market structure as another relevant variable. The third approach "the measurement" approach regarded choice as a function (among other things) of perceptions on and preferences of the various competing product attributes as relevant, and, therefore, perceptions and preferences are the dependent variables of interest.

The subject of positioning may be applied on any of the following:

1. brand/product/service/idea attribute(s) which may be either objective or subjective (perceived).
2. brand family or product group
3. company of an organization

The object of positioning may be the ultimate consumer, the distributor of the brand, other reference groups of the firm, or the public at large. Positioning is carried out in terms of the perceptions and preferences of the target towards and between the competing subjects in the environment conditioned by the market structure, either on an aggregate or on disaggregate level depending on the objectives of the research.

An illustrative case study on positioning is reviewed below to further clarify the concept.

#### Illustration

The topic of the study was the relative position of Finland as a tourist country. Several studies have been and are being carried out on a multitude of different aspects of Finnish tourism services, but research concerning the relative position of Finland as a tourist country is scarce. Therefore, insight into the problem of Finland's comparative standing as a summer holiday country was regarded to be a necessity as pointed out by the representatives of the travel trade who participated in this research process. The determination of Finland's competitive position was also regarded as an interesting question from the scientific point of view.

The problem of the study was to define Finland's position among competing summer holiday countries; and, the fundamental question to be answered was "what are the relevant dimensions of choice across the compared countries; and how are the countries positioned along these dimensions"?

The three approaches to positioning were discussed above. The third approach "the measurement" approach, was selected here as it represents the most scientific approach in the study of the problem.

When considering which one technique or a set of techniques is best suited for analysis of the problem, there is a multitude of literature in favour of multidimensional scaling and conjoint measurement related techniques (see Green and Wind 73, Nicosia and Wind 77, Green and Tull 78, Neidell 69, Wish, Deutsch and Bierer 75). Also due to the nature of the research problem - an exploratory research to determine the choice dimensions and the positions of competing countries along these dimensions - the multidimensional scaling approach was deemed most appropriate. (The total research design included factor and multidimensional scaling analysis of the derived dissimilarities, external and internal analysis of preferences, clustering of ideal points, and, discriminant analysis of the clusters. However, only scaling of dissimilarities and external analysis of preferences results are discussed here.

#### Data

For the purposes of the study, a survey of summer tourists was carried out in the three most important tourist destination areas, namely Helsinki and vicinity, Saimaa lake area, and Lapland in Finland in the summer of 1979. A sample of 681 observations were used for this study. The sample was grouped into five main groups according to nationality.

#### Analysis Procedure

It is appropriate to give a short description of the methodology used in this research. Multidimensional scaling is a powerful technique for positioning and segmentation purposes. The basic idea behind the use of MDS can be described as follows: Whenever respondents are asked to compare stimuli (ie. holiday countries) this will be done using a number of criteria. The result of this is a statement that two stimuli are more similar than two others. This gives a measure of "psychological distance" between stimuli. MDS is a set of techniques that translate these psychological distances back into the scores on criteria that the respondent based his judgment upon.

The process by which this can best be described is by starting with the opposite problem. If we have a map of, say, Finland with the location of 10 towns, it is an easy task to compare the distances between these towns (using Pythagoras theorem). MDS, however, solves exactly the reverse problem. Given the distances between the towns it would reproduce the "map of Finland". In other words, it would give the locations of the ten towns on two criteria (dimensions) a north/south and a east/west dimension.

Exactly the same process applies to the psychological distances above. Respondents are asked for dissimilarities for holiday destinations and a "psychological" map with the location of the holiday destination on the relevant dimensions are achieved.

When asking for dissimilarities we don't know the dimensions the respondents use in comparing holiday destinations. In the map example we know that the dimensions are north/south, west/east. One of the strong points in using MDS is the fact that it enables the researcher to find the relevant dimensions. As the MDS output gives the exact location of the brands on the relevant dimensions, it can give an important insight into the market considered.

(The alternative conceptual approaches to the scaling of similarities data are enumerated in Green and Rao 72, p. 6).

In the current application, several reasons forced us to use the indirect measure of (dis)similarity. The choice of the data gathering technique is always a trade-off between alternatives. The testing of the questionnaire showed us that this questionnaire could certainly not be extended if we wanted to keep the response at a high level. Therefore, we decided on an efficient use of the available space. This was realized by using the rating of countries on characteristics both for the profile analysis, (results not shown here) and the derivation of psychological distances.

Given the scores on all characteristics for all holiday countries the dissimilarity measure can be derived by subtracting the scores of two countries on each characteristic and sum the squares of the differences. This results in a dissimilarity measure between every pair of countries for each respondent. Since our primary concern is not with individual respondent, but with the group this sample represents, we have averaged these measures over all individuals. This gives us the average distance between any two holiday destinations for the entire sample.

The scales measured only the rank order of the stimuli.

A segmentation study would, of course, concentrate on different groups of people. As will be shown, this has been realized by taking nationality as the segmentation criterion and, therefore, by developing the dissimilarity measure for each of the five nationality groups. Obviously, other segmentation criteria can be used.

#### Algorithms

The scaling programs used were KYST-2 and PREFMAP. PREFMAP phase IV was used for property fitting instead of PROFIT.

#### KYST

KYST-2, a successor to KYST (Kruskal, Young, Shepard, and Torgerson) a merger of MDSAL 5 and TORSCA 9, includes the configuration procedure developed by Torgerson, and it also enables a principal components rotation of the derived dimensions.

#### Property fitting

PREFMAP (here the Edinburgh-75 version) developed for the fitting of preference data to an externally supplied configuration of objects was used in this instance to fit the perceptual dimension by nation. The PREFMAP IV phase (vector model) was used to fit the attribute vectors to the map in such a way that the projections of each country were as highly correlated as possible with the average scores of each country on each attribute, as obtained from the 10x12 distance matrix.

The vector configurations of the fitted dimensions are presented in figures 2 and 3.

The scaling of the preference data alternatives have also been summarized in Green and Rao 72, p.9. In this study an external approach was used. An external approach implies development of joint space from the similarities and the preference data separately, whereas in the internal approach, the joint space is created simultaneously utilizing only the preference observations.

As stated by Chang and Carroll in "How to Use PREFMAP and PREFMAP 2 - Programs Which Relate Preferences Data to Multidimensional Scaling Solution (see J.J. Chang and J.D. Carroll, Bell Laboratories, Murray Hill, New Jersey) the purpose of the algorithm is to find a joint space.

Given a stimulus configuration and a set of preference scales in the form of a subject-by-stimulus matrix, the algorithm finds for each individual an ideal point in a stimulus space such that the squared Euclidean distances from each stimulus to the ideal point are linearly or monotonically related to the preferences expressed by the subject.

The finding of ideal points proceeds via a hierarchy of four models which are corresponded by four phase procedure.

#### Results

The perceptual spaces of the respondents to be analyzed were divided into groups of nationalities. The analysis was carried out in one, two or three dimensions. The one dimensional will be presented and analyzed first.

For reasons of brevity only two respondent groups' - the Dutch and the Scandinavians - output is compared and analyzed here.

(See Figure 1; One dimensional plot of Dutch and Scandinavians.)

When all the stimuli were "squeezed" into the same dimension, Finland and France were regarded as polarities by the Scandinavians. It was interesting to note that Sweden and Norway were perceived to locate midway between Finland and France by the respondents. A possible explanation is that Scandinavians do not perceive Finland as part of Scandinavia.

Ireland, Austria, Switzerland and Britain were perceived to be closer to Sweden and Norway than Finland. This distance may be meaningful for decisionmaking purposes as the perceived difference could be used as one of the fundamental message in the advertising programs.

The one dimensional plot of Dutch perceptions reveals Finland as totally opposite from Holland. The Dutch tourists perceived Norway, Ireland and Sweden to be most similar to Finland and, Spain, Germany and France to be most dissimilar to Finland. Switzerland and Austria were located in the center of the continuum.

One dimensional plots are crude measures that only hint towards some polarities, but they are useful to gain fast insight into the data.

Almost all MDS programs lead to a solution that might be orthogonally rotated. In order to improve readability we have rotated the following figures where necessary.

#### Property fitting

The property fitting of dimensions along which Scandinavians perceived Finland in relation to other countries gave the attributes "easy to reach" and "different experience" properties as the relevant ones. Finland was positioned almost ideally along the "easy to reach" dimension and relatively near the ideal point along the "different experience". All other dimensions tended to be moderately correlated with at least one of the two.

Attributes that fit onto the map significantly (i.e. the correlation between country projections onto that



fitted attribute vector and the average country projections on the attribute is significant) are possible explanations of the basis on which the respondents in the sample initially made their judgements of similarity (i.e. they are attributes that may be determinant of perception, see Hooley 79, p. 21).

#### Perceptual preference mapping

There are two models of preference mapping in the PREFMAP program: the ideal point model and the ideal vector model. Here the plot of the ideal vector model only is presented to illustrate the positioning process.

The input data consisted of respondents' preference ranking of the stimuli. In the vector model it is assumed that the utility increases without limit and the preference is direction dependent. The cosine of the angle that the vector makes with the attribute dimension (there are only two almost opposite preference vectors drawn as examples) represents the tradeoffs that the respondent makes among changes along the attribute dimensions.

**Figure 3** illustrates this point for two respondents, one from segment I, respondent L and the other, segment II respondent V. In the case of respondent L, we note that his tradeoffs highly favor "accessibility" and "different experience". Finland projects highest on L's utility vector, while Holland projects lowest. In contrast, respondent V weighs, about equally, changes in "accessibility" and "different experience": France (B) projects most highly on V's vector, while Finland comes only average. Switzerland comes in last in preference.

#### Conclusion

If we were to use the information of **Figure 2** alone, we would be misled to believe that Finland (2) is the most preferred stimulus along the "accessibility" dimension, the conclusions should be to stress the need of concentrating the marketing efforts around this dimension. But **Figure 3** produces additional insight by showing that there is some distance between segment I and Finland, and shows the first partial conclusion to be incorrect.

Therefore, we should, basically, either 1. "move" Finland towards segment I, 2. "move" the segment more towards Finland, or 3. do both 1 and 2 to create a more advantageous comparative situation for Finland. This "movement" could be achieved through the marketing mix activities.

As we have outlined the discussion on some conceptual problems around the concept of positioning and illustrated our point with an example, we conclude by defining positioning as a continuous strategic process of measuring the perceptions and preferences of the target market (respondents) towards the alternative market offerings in order to define the position of the stimuli along relevant competitive dimensions and to provide for a set of alternatives for marketing strategies likely to gain success to the organization's endeavour in the competitive setting.

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FIGURE I

DUTCH  
 B J C E F D I A K H L G

SCANDINAVIANS  
 B A I D C E J H L F G K

- |             |    |                 |     |
|-------------|----|-----------------|-----|
| A = Britain | =1 | G = Holland     | =7  |
| B = Finland | =2 | H = Germany     | =8  |
| C = Ireland | =3 | I = Switzerland | =9  |
| D = Austria | =4 | J = Norway      | =10 |
| E = Sweden  | =5 | K = France      | =11 |
| F = Denmark | =6 | L = Spain       | =12 |

FIGURE 2

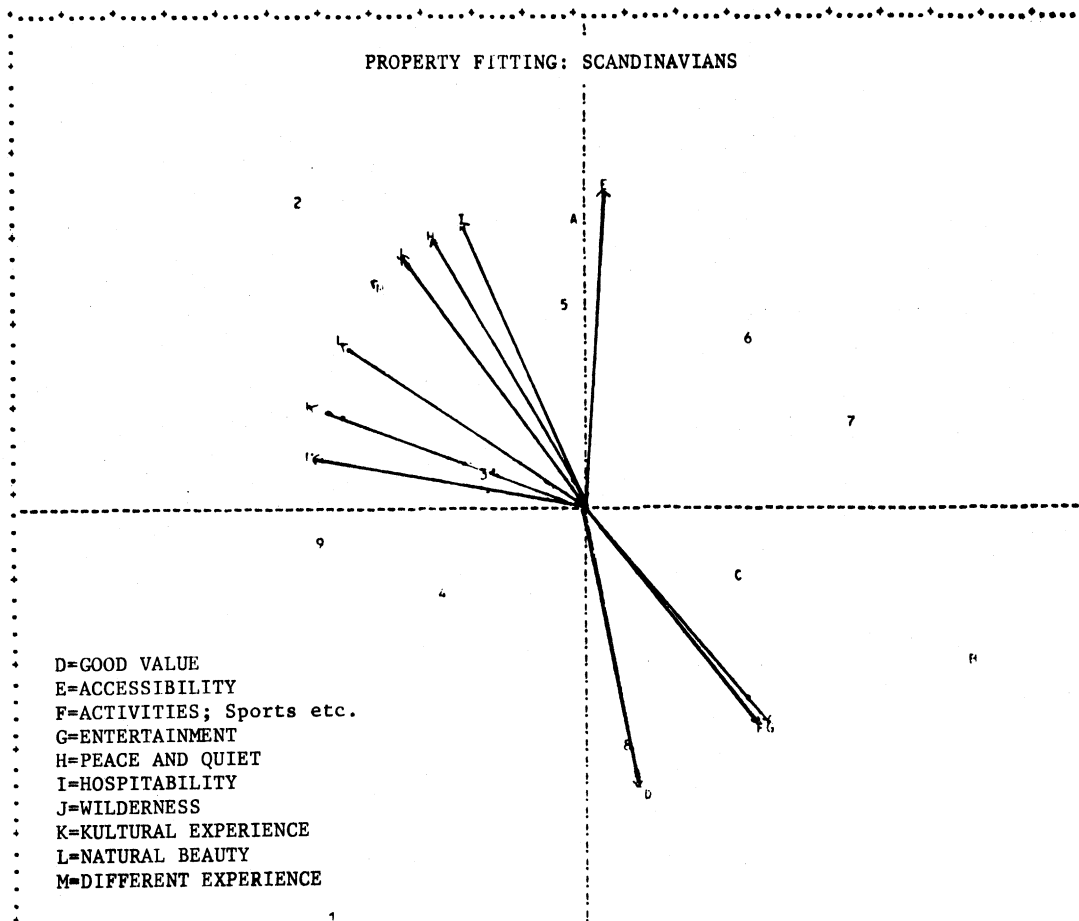
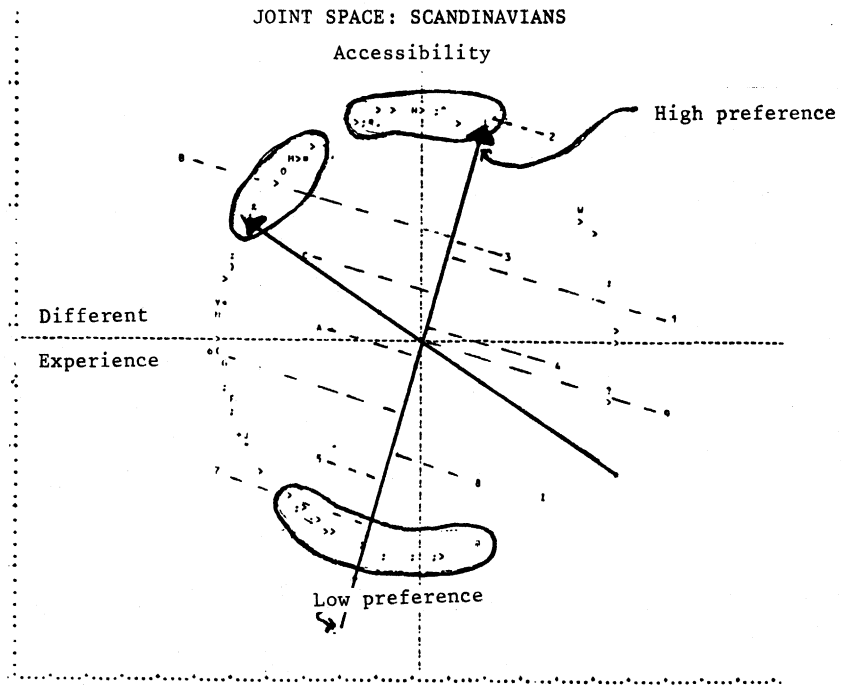


FIGURE 3



## THE MAJOR (LARGEST? BEST?) CONSUMER MARKETS - WHERE ARE THEY?

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### Abstract

How do you define a consumer market? How large should a single market be? Where are the largest markets today? Why is it important to know exactly which are the major markets? Why are various lists of major markets different? These questions are examined and answered in this paper.

### Introduction

Is Pittsburg the eighth largest consumer market as reported by The Conference Board or is it fourteenth as reported by the Census Bureau? Is Omaha and Charlotte among the top thirty-eight markets as reported by Neilson or are they sixty-ninth and seventieth as reported by Advertising Age? How can Nielsen ignore San Diego and Tampa in their list of the thirty-eight most important markets when these two cities rank in the top twenty-five of every one else's list? Why did the Association of MBA Executives in their survey of the quality of life in 50 cities include Wilmington (72nd), Tulsa (60th), Syracuse (56th) and Toledo (48th) but ignore San Antonio (36th) and Tampa (25th)?

One of the answers to these questions is that any list of major markets will change over time and the only way to compare lists is to use the same data for the same time period. Another answer is that although population is the most commonly used measure of size, some people use other measures. But the answer that accounts for most of the discrepancies is that different people use different boundaries to define their markets.

The purpose of this report is to discuss these issues, suggest how the job should be done and then prepare a list of major consumer markets using these suggestions.

This is not just an exercise in number crunching. Since most marketers operate with limited resources it is important that they pick their markets carefully. Very few firms can afford to go national immediately with every product and many firms can never go national. It is possible to cover very significant portions of the United States market selectively. Over half of the disposable income in the United States is found in less than fifty compact markets. Assuming that resources are limited the final list generated here will be limited to the most important markets in the continental United States. Foreign markets will be ignored because of export consideration and markets outside of the continental U.S. will be ignored because of distance and shipping costs.

### Size and Boundaries

There should be no problem in defining the boundaries of a consumer market. The office of Federal Statistical Policy and Standards has, since 1977, defined for reporting purposes the metropolitan areas of the United States (Office, 1975). Before 1977 the function was performed in the Office of Management and Budget. The basic unit is the SMSA (Standard Metropolitan Statisti-

cal Area) which is composed of one or more counties or their equivalent. As of June 30, 1979 there were 281 SMSA's in the United States.

In New England towns and cities are used instead of counties. Since most data is collected by county many reports use the unofficial NECMA (New England County Metropolitan Area). It is important to note that the difference between an NECMA and an SMSA is not just the use of counties instead of towns and cities. Many NECMA's include more than one SMSA. There is some consolidation. For example the Boston NECMA which covers six counties includes most or all of four SMSA's (Boston, Lowell, Brockton and Lawrence-Haverhill). There are thirteen NECMA's which cover 26 SMSA's.

As time has passed and adjacent metropolitan areas have grown closer together there has been recognition that some of these contiguous areas have essentially become one market. A new metropolitan area has been defined called the SCMA (Standard Consolidated Metropolitan Area). An SCMA is a combination of SMSA's. At the present time there are thirteen SCMA's.

One of the major problems in comparing lists is that different people use different combinations of SMSA's, NECMA's and SCMA's. Very few lists use only SMSA's. The Census Bureau does every ten years (U.S., 1973) and The Conference Board does on one of their lists (Axel, 1977). The Conference Board provides some insight into one aspect of the problem of changing boundaries. In their publication, A guide to Consumer Markets 1977/1978 on page 35 is a table titled, "The 50 Largest Metropolitan Areas in 1974" and on the next page is a table titled, "Population of Leading Metropolitan Areas, 1970" (Axel, 1977). Both lists are ranked by size and there is a note pointing out that although the lists are by SMSA they are not comparable because the definitions of the SMSA's had changed. This is not only confusing but the two lists are useless for the purpose of making comparisons. You wonder why they published both lists especially when the older list could have been revised to conform to the new definitions.

The most frequent combination is SMSA's and NECMA's. Lists of this type are put out by the Census Bureau (U.S., 1980, p. 27), Advertising Age (Hong, 1979) and Sales and Marketing Management (Survey, 1980).

The most logical method would be to use all three (SMSA's, NECMA's and SCMA's), using only the largest markets. Thus if the SCMA is larger than the NECMA you would use the SCMA. There seems to be only one list that uses this approach (U.S., 1980, p. 26) and it is relatively new as indicated by the fact that the Census Bureau which publishes the list has not yet standardized the format. This can be seen by comparing (U.S., 1980 p. 26) to (U.S., 1979, p. 28)

An important list put out by Nielsen (1978) does not use SMSA's, NECMA's and SCMA's but defines its own metropolitan areas. The central cities are the same and in a few cases the Nielsen area is very close to the government defined areas. For some reason the Nielsen list which purports to cover the thirty-eight most important markets does not include at least a half dozen markets that by any definition or criteria are

more important than some of the cities on the Nielsen list.

In addition to Nielsen there are at least two other lists that do not use SMSA's. One is the BEA Economic Areas (Bureau, 1977) put out by the Bureau of Economic Analysis, Department of Commerce and the other is Rand McNally's (1980) list of Basic Trading Areas and Major Trading Areas. Both of these lists cover the entire country. There are 181 BEA Economic Areas and 494 Rand McNally Basic Trading Areas combined into 50 Major Trading Areas. By covering every county in the United States these areas include many counties with very low population densities and insignificant markets.

As an example the Memphis SMSA covers four counties with a population of about 900,000, the Rand McNally Memphis basic trading area covers 37 counties with a population of about 1,600,000, the Nielsen Memphis market covers 54 counties with about 2,200,000 people, the Memphis BEA area covers 67 counties with about 2,500,000 people and the Rand McNally major trading area covers 97 counties with about 3,500,000 people. The four counties in the Memphis SMSA cover 2,300 square miles which means a population density of almost 400 people per square mile. The 97 counties in the major trading area cover 55,000 square miles which means a density of almost 65 people per square mile. Also the Rand McNally major trading area includes another SMSA (Jackson, MS) which is 200 miles from Memphis.

Finally the 97 Rand McNally counties, the 54 Nielsen counties and the 67 BEA counties are not additions to each other. Obviously the four SMSA counties are part of all the larger lists and the 37 counties in the Rand McNally basic area is a part of their major area but Rand McNally (97), BEA (67) and Nielsen (54) each cover counties not covered by the others.

In Table 1 five different lists are compared. These lists represent several of the types discussed above. An attempt has been made to rank the lists by population as of the same date. Different groups estimate population in different ways which will account for some of the discrepancies but the major reason for the difference in the rankings is that each list represents different sizes for the same markets.

Although the population estimates are within six months of each other the lists show interesting variations. On the five lists Washington ranks 5th, 7th, 7th, 8th, and 8th; San Francisco is 5th, 6th, 6th, 7th, and 8th; Boston is 6th, 6th, 7th, 8th, and 9th; St. Louis is 10th, 12th, 12th and 15th; Pittsburgh is 8th, 10th, 13th, 13th and 14th; Cleveland is 9th on two lists and 17th on two others; Memphis is 21st on one list, 41st on another and 42nd on a third while Grand Rapids is 31st, 66th and 70th on three lists.

#### The Logical Boundaries

It would seem that the most logical method of constructing a list of major consumer markets would be to follow these rules for defining the boundaries:

- (1) Use government defined areas specifically SMSA's, NECMA's and SCSA's. These definitions are almost universally recognized for statistical purposes.
- (2) Use whichever is the largest. Since these SMSA's, NECMA's and SCSA's by definition represent single markets it makes sense to use whichever unit represents the largest single market, the largest degree of consolidation.
- (3) Try not to use New England SMSA's because interim data is usually provided for the NECMA's but not the New England SMSA's.

TABLE 1

#### COMPARISONS OF VARIOUS LISTS OF LARGEST MARKETS

Column 1	2	3	4	5	6
New York	1M	1M	1CE	1	1
Los Angeles	2M	2M	2C	2	2
Chicago	3M	3M	3C	3	3
Philadelphia	4M	4M	4C	4	4
Detroit	5M	5M	6C	7	5
San Francisco	6M	7M	5C	8	6
Washington	7M	8M	8M	5	7
Boston	8M	6E	7E	6	9
Nassau-Suffolk	9M	9M	*	*	NL
Dallas	10M	10M	11M	11	NL
Houston	11M	11M	10C	12	NL
St. Louis	12M	12M	12M	15	10
Pittsburgh	13M	13M	14M	10	8
Baltimore	14M	14M	15M	*	NL
Minneapolis	15M	15M	16M	14	NL
Newark	16M	16M	*	*	NL
Cleveland	17M	17M	9C	9	NL
Atlanta	18M	18M	18M	16	NL
Anaheim	19M	19M	*	*	NL
San Diego	20M	20M	19M	NL	NL
Denver	21M	21M	22M	25	NL
Miami	22M	22M	13C	13	NL
Seattle	23M	23M	17C	19	NL
Milwaukee	24M	25M	21C	22	NL
Tampa	25M	24M	23M	NL	NL
Cincinnati	26M	26M	20C	17	NL
Buffalo	27M	27M	24M	24	NL
Riverside	28M	28M	*	*	NL
Kansas City	29M	29M	25M	20	NL
Phoenix	30M	30M	26M	27	NL
San Jose	31M	31M	*	*	NL
Indianapolis	32M	32M	27M	18	NL
New Orleans	33M	33M	28M	NL	NL
Portland	34M	34M	29M	23	NL
Columbus	35M	35M	30M	NL	NL
San Antonio	36M	37M	32M	36	NL
Rochester	37M	38M	NL	38	NL
Sacramento	38M	39M	NL	28	NL
Providence	39M	43E	NL	*	NL
Louisville	40M	40M	NL	32	NL
Memphis	41M	42M	NL	21	NL
Fort Lauderdale	42M	41M	NL	*	NL
Dayton	43M	44M	NL	*	NL
Salt Lake City	44M	45M	NL	NL	NL
Birmingham	45M	47M	NL	29	NL
Albany	46M	48M	NL	33	NL
Norfolk	47M	49M	NL	NL	NL
Toledo	48M	50M	NL	*	NL
Greensboro	49M	51M	NL	NL	NL
Nashville	50M	52M	NL	26	NL
Oklahoma City	51M	53M	NL	34	NL
Hartford	52M	36E	31E	NL	NL
Jacksonville	54M	56M	NL	37	NL
Charlotte	62M	64M	NL	30	NL
Omaha	65M	68M	NL	35	NL
Grand Rapids	66M	70M	NL	31	NL
Bridgeport	93M	46E	*	NL	NL

\*Part of an SCSA and/or Nielsen includes all or most of that area in another area. The numbers indicate rank on the list.

Table 1 continued on next page



C indicates an SCSA  
M indicates an SMSA  
E indicates an NECMA  
CE indicates an SCSA using the NECMA in the New England part  
NL means the city is not part of that list

- Column
1. City. Where an SMSA has more than one city in its name we have shown only the first name.
  2. SMSA's by population rank (7/1/77). The source for this ranking of SMSA's is the 1979 Statistical Abstract of the United States, pp. 938-43. A similar list appears in Current Population Reports series P-25, No. 810 (p.26) and No. 873 (p.27) but these are not true lists of SMSA's because NECMA's are substituted for SMSA's.
  3. Sales and Marketing Management Metro Marketing Rankings by population (12/31/77). This column is taken from the 1978 Survey of Buying Power, the July 24, 1978 issue of Sales and Marketing Management. Although not clearly stated they seem to be using a combination of SMSA's and NECMA's. Similar lists are put out periodically by Advertising Age (Hong, 1979).
  4. Census Bureau Metropolitan Complexes by population rank (7/1/77). This column is similar to Table 3, page 26 of Current Population Reports series P-25, No. 873 but is ranked by 7/1/77 population data from the same publication pages 25 and from the 1979 Statistical Abstract of the United States, pp. 938-944.
  5. Nielson's Major Markets ranked by population (1/1/78). Nielson provides a marketing research service for what they call "38 of the most important U. S. Marketing areas." It is the Nielson Major Market Service. Although they include parts of SCSA's SMSA's or NECMA's very few, if any, of their 38 major markets conform exactly to these government definitions. Most are larger and some are smaller. It is worth noting that Nielson combines Washington and Baltimore into a single market. The differences between the Nielson list is not due to the difference in areas. For example, the San Diego and Tampa SMSA's are still much larger than the Charlotte and Omaha areas as defined by Nielson. It may be that their list was originally developed when the rankings were different or it may be that they desired some sort of geographical balance. At any rate their major or most important markets are not the largest.
  6. Conference Board's Ten Largest Markets ranked by number of families. Source is "The Big Ten-A Bae-deker for marketers" by Fabian Linden in Across the Board The Conference Board Magazine, March, 1979, p. 77. Although the article was published in 1979 the author used old data and these are the top ten SMSA's using the 1970 definitions. The major problem with this listing is that the author had available (despite his disclaimer) much more recent data on population, households and boundaries but did not use it.

MAJOR MARKETS RANKED BY 7/1/78 POPULATION

Rank	Principle City	Type of Area	Number of SMSAs	Population*
1	New York	SCSA-NEC	11	16,761
2	Los Angeles	SCSA	4	10,784
3	Chicago	SCSA	2	7,678
4	Philadelphia	SCSA	3	5,603
5	San Francisco	SCSA	3	4,717
6	Detroit	SCSA	2	4,641
7	Boston	NECMA	4	3,888
8	Washington	SMSA	1	3,017
9	Cleveland	SCSA	3	2,867
10	Houston	SCSA	2	2,793
11	Dallas	SMSA	1	2,720
12	St. Louis	SMSA	1	2,386
13	Miami	SCSA	2	2,333
14	Pittsburgh	SMSA	1	2,277
15	Baltimore	SMSA	1	2,145
16	Minneapolis	SMSA	1	2,063
17	Seattle	SCSA	2	1,905
18	Atlanta	SMSA	1	1,852
19	San Diego	SMSA	1	1,744
20	Cincinnati	SCSA	2	1,646
21	Milwaukee	SCSA	2	1,594
22	Denver	SMSA	1	1,505
23	Tampa	SMSA	1	1,396
24	Kansas City	SMSA	1	1,325
25	Buffalo	SMSA	1	1,303
26	Phoenix	SMSA	1	1,293
27	Indianapolis	SMSA	1	1,156
28	New Orleans	SMSA	1	1,141
29	Portland	SMSA	1	1,140
30	Columbus	SMSA	1	1,089
31	Hartford	NECMA	3	1,045
32	San Antonio	SMSA	1	1,038
33	Rochester	SMSA	1	970
34	Sacramento	SMSA	1	951
35	Providence	SMSA	1	903*
36	Memphis	SMSA	1	889
37	Louisville	SMSA	1	887
38	Salt Lake City	SMSA	1	843
39	Dayton	SMSA	1	834
40	Birmingham	SMSA	1	818
41	Norfolk	SMSA	1	808
42	Albany	SMSA	1	800
43	Oklahoma City	SMSA	1	792
44	Nashville	SMSA	1	789
45	Greensboro	SMSA	1	786
46	Toledo	SMSA	1	779
47	New Haven	NECMA	3	776
48	Jacksonville	SMSA	1	720
49	Syracuse	SMSA	1	650
50	Worcester	NECMA	2	645
	Totals		84	143,015

\* estimated by the author, population figures in thousands  
The Total United States population is 218,063,000 and these fifty markets account for 66 percent of the total U.S. market. The first ten markets total 62,749,000 or 29 percent of the total U.S. market.

Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 873, "Estimates of Counties and Metropolitan Areas: July 1, 1977 and 1978," U.S. Government Printing Office, Washington, D.C., 1980.

Such a list is presented in Table 2, ranked by population as of 7/1/78 as reported by the Census Bureau (U.S., 1980). The list shows the name of the major city, the rank, the type of metropolitan area and the number of SMSA's in that market if there is more than one. If they exist for a given area the SCSA is used, if not, the NECMA. If there is no SCSA or NECMA the SMSA is used. There are three exceptions:

TABLE 3

THE BEST CONSUMER MARKETS AS OF 12/31/79

Rank	Principle City*	Column					
		1	2	3	4	5	6
1	New York	16.81	7.88	145.43	7.58	8	147
2	Los Angeles	11.03	5.50	92.67	6.66	5	26
3	Chicago	7.65	3.86	66.57	7.07	5	41
Top Three Markets		35.49 (11%)	17.24 (17%)	293.67 (18%)	21.31 (22%)	18 (20%)	214 (43%)
4	Philadelphia	5.61	2.58	44.50	1.51	4	15
5	San Francisco	4.80	2.58	45.41	4.64	5	17
6	Detroit	4.63	2.41	40.47	1.84	4	18
Top Six Markets		50.53 (23%)	24.81 (25%)	435.05 (27%)	29.30 (31%)	31 (35%)	264 (53%)
7	Boston	3.90	1.78	30.26	2.37	4	7
8	Washington	3.05	1.65	29.53	2.86	3	6
9	Houston	2.99	1.61	26.46	1.87	3	13
10	Dallas	2.80	1.46	24.03	3.81	3	13
11	Cleveland	2.87	1.38	22.99	1.31	3	18
12	Miami	2.42	1.26	20.08	3.49	1	4
Top Twelve Markets		68.56 (31%)	33.95 (34%)	588.40 (36%)	45.01 (47%)	48 (54%)	325 (65%)
13	St. Louis	2.39	1.11	18.00	1.86	3	12
14	Minneapolis	2.07	1.05	17.03	1.57	3	19
15	Pittsburgh	2.25	1.02	16.72	1.76	3	16
16	Seattle	1.98	1.00	16.51	1.58	3	5
17	Baltimore	2.16	.94	15.05	.58	2	2
18	Atlanta	1.91	.91	14.77	6.95	3	5
19	San Diego	1.84	.86	14.13	1.10	3	-
20	Denver	1.58	.79	13.02	3.22	3	4
21	Cincinnati	1.65	.76	12.46	.53	2	5
22	Milwaukee	1.59	.76	12.54	.57	2	3
23	Kansas City	1.33	.69	11.57	1.04	3	5
24	Tampa	1.47	.68	10.62	1.23	1	1
25	Phoenix	1.39	.66	10.74	1.19	1	2
Top Twenty-five Markets		92.17 (42%)	45.18 (45%)	771.56 (48%)	68.19 (71%)	80 (90%)	404 (81%)
26	Portland	1.19	.59	9.53	.72	1	5
27	Buffalo	1.28	.56	9.20	.65	2	1
28	Indianapolis	1.17	.56	9.12	.57	1	2
29	New Orleans	1.16	.53	8.76	1.04	1	2
30	Columbus	1.11	.52	8.56	.46	-	2
31	Hartford	1.05	.48	8.37	.53	1	7
32	Sacramento	.98	.48	7.64	.47	-	-
33	Rochester	.97	.46	7.73	.31	-	1
34	San Antonio	1.05	.44	6.91	.44	1	1
35	Louisville	.89	.42	7.08	.37	-	-
36	Oklahoma City	.81	.39	6.28	.37	-	1
37	Dayton	.84	.39	6.46	.33	-	2
38	Memphis	.90	.38	6.01	.86	-	-
39	Toledo	.78	.38	6.49	.10	-	3
40	Providence**	.90	.38	6.39	.16	-	1
41	Nashville	.80	.38	5.89	.40	-	1
42	Salt Lake City	.88	.37	5.75	.72	1	-
43	Birmingham	.83	.37	5.73	.26	-	1
44	Greensboro	.79	.36	5.85	.24	-	6
45	Albany	.79	.35	5.65	.24	-	-
46	New Haven	.76	.33	5.66	-	-	-
47	Norfolk	.82	.33	5.17	.31	-	-
Top Forty-seven Markets		112.92 (51%)	54.63 (55%)	925.79 (57%)	78.74 (82%)	88 (99%)	440 (88%)

Table 3 continued on next page

**Table 3** continued from the preceding page

The percentages in parentheses is the percent of the United States total represented by the figure above it.

\* The type of area for each principle city is the same as that shown in **Table 2**

\*\* All figures estimated by the author.

Column:

1. is population in millions of people as of 12/31/79/ The total U. S. population is 221,580,000.
2. is the Sales and Marketing Management 1979 Buying Power Index which totals 100 for the entire United States. The cities in this table are ranked by this index.
3. is the Sales and Marketing Management estimate of 1979 effective buying income, also known as disposable personal income, in billions of dollars. The total for the U.S. is \$1,618,640,000,000.00.
4. is 1979 airport activity of the major, medium and minor hubs in that area as a percent of the total United States hub activity. The total hubactivity for the U.S. is 96.13% of all air traffic activity. Source: Federal Aviation Administration, FAA Statistical Handbook of Aviation, U.S. Department of Transportation, 1979.
5. is the number of major league teams in the area (baseball, football, basketball and hockey). The total for the U.S. is 89.
6. is the number of large firms which had their home offices in the area in 1978. The figures are based on the 50 largest advertising agencies, the 50 largest banks, the fifty largest insurance companies the 50 largest retailers, the 50 largest transportation firms, the 50 largest utilities and the 200 largest industrial firms for a total of 500. Source: Rand McNally and Co., 1980 Commercial Atlas and Marketing Guide, Chicago: Rand McNally, 1980.

- (1) In the case of the New York SCSA the Connecticut part is larger Bridgeport NECMA rather than the smaller Stamford and Norwalk SMSA's which are technically the Connecticut part of the New York SCSA. This will be designated as a SCSA-NEC.
- (2) Since the Boston NECMA is larger than the Boston SCSA the NECMA will be used.
- (3) Since the Providence SMSA is larger than the Providence NECMA the SMSA will be used. This will require estimating data for the SMSA since most sources use the NECMA.

#### Measure of Market Size

The most common measure of market size is population. The best measures relate to income and sales. Sales and Marketing Management (Survey, 1980) provide the most sophisticated measures—measures of physical size (population, households, and age groups) and dollar measures (income by types and groups, retail sales in total and for several categories). These data are timely (published about seven months after the fact) and frequent (published annually).

Reputed to be the most frequently used measure of market size is Sales and Marketing Management's Buying Power Index (BPI) which is a weighted coverage of the population, disposable personal income (effective buying income) and retail sales in an area. **Table 3** is a list of what, in our best judgement, are the best consumer markets in the continental United States. This list is ranked by the Buying Power Index which is shown in column two of **Table 3**. Also shown in **Table 3** are population (column one) and effective income (column 3).

In addition data are provided on the air traffic in each market (column four), the number of major league sports teams (column five) and the number of large firms that have their home offices in the area (column six). These are also useful and interesting measures of market size and importance. Obviously the list of possible measures is endless.

**Table 3** is divided into groups of the top three, top six, top twelve, top twenty-five and top forty-seven markets. The divisions were selected on the basis of the differences between groups not on some arbitrary grouping like ten, twenty-five and so on. For example the difference in BPI between the third and fourth areas is 50%, it is 7% between the fourth and sixth and it is 35% between the sixth and seventh so it seemed logical to group the fourth, fifth and sixth areas together.

#### The Best Markets

As shown in **Table 3** the top three markets account for 17% of the buying power in the entire United States, the top six account for 25%, the top twelve for 34%, the top twenty-five for 45% and the top forty-seven for 55%.

People talk about being "in the big league" which is a phrase borrowed from sports. It is interesting to note that 90% of all big league sports teams are in the top twenty-five cities on the list. With the exception of Miami there is a strong correlation between rank (or population) and the number of big league teams in an area.

The relationship between the number of home offices in an area and rank is not as clear. Los Angeles is obviously not a "home office" town despite its size. On the other hand Cleveland, Minneapolis and Pittsburgh have more than their share of home offices. These figures are of interest to firms serving the industrial market. It has been relatively easy to put together a list of the best consumer markets. An interesting project would be to put together a list of the best industrial markets. It would not be the same as the consumer list.

Air traffic is obviously not a function of population. It depends on the area's position as a hub and to a lesser extent the area's position as a tourist attraction.

This is a dynamic society. It will be interesting to see how this list changes over time. For example will Baltimore and Washington be combined into an SCSA? Will cities not presently on the list be combined into an SCSA, for example Harrisburg, York and Lancaster? Such a combination would rank in the low thirties. How will differing rates of growth (or even decline) change the relative position of the larger areas such as Philadelphia, San Francisco, Detroit, Boston, Washington, Houston, Dallas, Cleveland and Miami? These ranking have changed in the recent past and will continue to change. The areas from St. Louis on down are so close in size that relative position could change on a yearly basis.

One of the purposes of this research is provide a benchmark that can be used in the future to track these changes.

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GOVERNMENT PROCUREMENT POLICIES: AN INVISIBLE BARRIER TO US EXPORTS  
IN THE 1980's

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Abstract

The multilateral trade negotiations and agreements on government procurement policies and practices which was made by the General Agreement on Trade and Tariff in 1979 to be applied beginning January 1981 represents a big step forward in the effort to reduce invisible barriers to world trade. However, it is important to realize that the policing and enforcement of such agreements between signatory countries remains an important issue which needs to be resolved in the 1980s. With the grim world economic outlook ahead, it is not surprising that violation of the government procurement agreement might occur in some countries. In order to promote export and compete effectively in world markets, the US manufacturers should try to take advantage of the new opportunities offered to them with the opening of some government procurement business overseas and the US Government should try to monitor constantly overseas markets to prevent violations settle disputes and help US exporters with more information on government procurement offers for bids.

Introduction

The US Trade Agreements Act of 1979 culminated in the conclusion of the Multilateral Trade Negotiations (MTN) in Geneva after many years of effort to improve and make more stable the world trade environment. Among many other important agreements, the MTN agreement on government procurement was a recognition of the importance of the role of governments in the future's world trade. It is clear that with the increasing role of the public sector in most countries, decision by governments to purchase goods from one country instead of another will have an important impact on the environment of world trade.

Just ten months after the 1979 MTN and Tokyo Round trade liberalization movement, a new surge of protectionism in government procurement is taking place. The French government recently has vetoed plans for a government-controlled firm to purchase Japanese container ships and has offered instead a forty million subsidy to the firm for building ships in France. It also has blocked the purchase of a French TV rental company by a British firm with Japanese ties. Such invisible protectionist practices by the French government should not be a surprise at a time when the whole world may be headed for a deep recession and domestic pressure to lessen unemployment become more and more urgent. It is the purpose of this paper to review the invisible barrier to trade by government procurement practices among major trading countries to US manufactured exports in order to assess their causes and especially their impact on US manufactured exports in the 1980's.

Government Procurement Restrictions

Features of Invisibility

Government procurement restrictions to foreign suppliers and the preference accorded to domestic suppliers may be incorporated in published laws and regulations such as the Buy-American Act of 1933 in the US. In most countries, however, government procurement restrictions are hidden behind a variety of practices and procedures. One common invisible practice among major trading nations is to have little publicity in the solicitation of bids and especially in the disclosure of the criteria on the basis of which contracts are to be awarded.

There are basically three techniques used in the solicitation of bids for government purchases. The first technique is called "public tender" where invitations to bid are publicized widely. This is the most transparent bidding procedure. The second bidding technique called "selective tender" is less transparent because invitations are limited to selected suppliers. The third bidding technique called "single tender" is the most restrictive government procurement practice because the purchasing agency contacts only one chosen supplier.

More seriously, even with a fully transparent bidding procedure such as the public tender, invisible discrimination can still be exercised via the withholding of the criteria for bid acceptance. The purchasing agency can withhold commercial criteria such as price, quality and delivery terms as well as other noncommercial criteria which may include price preference given to domestic suppliers. Foreign suppliers can also be suppressed through specific conditions of bidding which put them at a disadvantage such as certain types of red tape or allowing inadequate lead time for the preparation and submission of bids. Finally, the purchasing agency may specify the technical requirements in advance collaboration with domestic suppliers thereby limiting from the outset the possible competitiveness of foreign suppliers.

Example of Restrictions

1 - In Japan, the National Telephone and Telegraph Corporation (NTT) and the Kokusai Denshin Denwa Corporation (KDD), which are two government owned corporations, receive virtually all equipment procurement contracts from the Japanese Government. In the automobile assembly industry, the electronic industry, the machinery construction industry and in the Japan Railways, regardless of price, quality and availability, virtually all metal tools are purchased from Japanese suppliers. Also, major users of computer systems in Japan are discouraged from adopting foreign produced systems due to implicit import license



practice attributable to local government procurement policies.

Although there is no legislative requirement in Japan specifying preferential treatment for domestic suppliers, de facto discrimination against foreign suppliers is very prevalent. Almost no goods and services are processed by the Japanese government agencies via public tender. Selective tender is common practice and often selected domestic bidders are informally contacted by the purchasing agency to submit estimates.

2 - In France, the national government owned utility company, Electricité de France (EdF) buys only French-made generators. The French "Plan Calcul" requires French firms to buy computer equipment from the French firm CII. With approval of the Plan Calcul authorities domestic firms are allowed to purchase from foreign suppliers only when CII is unable to provide the goods and services sought.

In principle, foreign suppliers are supposed to be treated like domestic suppliers but in practice there is discrimination against the former and preference for the latter. Private or negotiated contracts without competitive bidding are the usual practice by the French government purchasing agencies.

3 - In the United Kingdom, the British government controlled and financed-computer firm called International Computers Limited (ICL) has virtually all contracts of computer purchases from the British government agencies. The general practice in the United Kingdom in government procurement is by single tender despite the absence of formal discriminatory provision against foreign suppliers. Furthermore, all contracts involving 50,000 or more pounds sterling must be referred to the British Treasury for review if it is contemplated that such contracts will be awarded to a foreign firm.

4 - In Italy, the Italian government has paid for tooling costs incurred by domestic rubber firms which exclude foreign manufacturers from competitive quotations on government related contracts. Current legislation does not forbid government agencies to invite foreign suppliers for bid. Legislation exists, however, that gives preference to domestic suppliers from Southern Italy and the Islands in order to promote the industrialization of those regions.

#### Intensity of Restriction

Although it is hard to assess accurately the degree of discrimination by other countries against US manufactured exports, it is still important to try to estimate the intensity of restriction by type of industry and country as shown on [Table I](#). The rank of 1 means high restriction, 2 means moderate restriction and 3 means marginal restriction.

As shown on [Table I](#), the Japanese government procurement practice is the most restrictive to foreign suppliers with country average rank equals to 1.76, followed by France with 1.98. The Canadian government procurement practice appears to be the least restrictive among the six major trading partners of the US with a rank 2.74.

By industry, it is shown on [Table I](#) that foreign suppliers of rubber products encounter the highest restriction with industry average rank equal to 1.75 while machinery and equipment products meet less restriction with industry average rank of 2.64. Electrical equipment, electronic equipment and automotive parts are facing more restriction also with industry average rank of 1.77, 1.98 and 1.92, respectively.

A cross-section inspection reveals that the Japanese government procurement practice has been mostly restrictive to foreign suppliers in the rubber, electrical equipment and automotive parts industries with rank of 1, 1.2 and 1, respectively. Foreign suppliers of machinery and equipments are subject to less restriction with rank equals to 2.5.

Table I

Industry	Intensity of Government Procurement Restrictions						Industry Average
	Japan	Canada	UK	Germany	Italy	France	
Rubber	1	-	2	-	2	2	1.75
Chemicals	-	-	-	-	-	-	-
Apparel	-	3	-	-	-	-	3
Pharmaceutical	2	-	-	3	2.3	2.3	2.40
Ferrous Metal	2	3	3	2.5	1.5	2.5	2.42
Machinery & Equipment	2.5	2.7	3	3	-	2	2.64
Computers & Office Equipment	1.8	2.5	2.3	2.4	2.4	2.2	2.27
Power Equipment	2	3	1.8	1.7	2	1.8	2.05
Scientific Apparatus	2	3	2.5	3	3	1.5	2.50
Electrical Equipment	1.2	3	1.4	1.7	2	1.3	1.77
Electronic Equipment	1.6	2.5	2.1	2.1	1.8	1.8	1.98
General Aviation	2	3	1.7	3	2.5	2.3	2.42
Heavy Aircraft	2	2	1	3	3	2	2.17
Automotive Parts	1	2.5	2	2	2	2	1.92
Country Average	1.76	2.74	2.07	2.49	2.23	1.98	

- Notes: 1. The rank of 1 equals high restriction, effectively closing the domestic market to foreign competition.
2. The rank of 2 equals moderate restriction, allowing some foreign participation but on a limited basis.
3. The rank of 3 equals marginal restriction, allowing foreign competition on a wide basis.
4. No rank means no restriction.

Source: National Association of Manufacturers data.

The Canadian government procurement practice is not at all restrictive to foreign suppliers in all fourteen industries covered in this study relative to the other five countries while the British government procurement practice is highly restrictive to foreign suppliers in the heavy aircraft industry, the general aviation industry, the electrical industry and power equipment industry with rank of 1, 1.7, 1.4 and 1.8, respectively as shown on [Table I](#).

In Germany, restriction to foreign suppliers is high only in the power equipment industry and the electrical equipment industry while in Italy restriction is high in the ferrous metal industry and the electronic equipment industry. Finally, in France, restriction is high in the power equipment industry, the scientific apparatus industry, the electrical equipment industry and the electronic equipment industry.

#### Causes of Restriction

##### Domestic Pressures

Despite the fact that the MTN agreement on government procurement establishes a system whereby the signatory countries are committed to make purchases above the \$195,000 level available to international as well as domestic bidding without discrimination, it is still



hard to believe that all countries will comply strictly with such agreement starting 1981 when there is no way to enforce such agreement and especially when they are expected to have economic and political problems domestically.

In Japan, the 10% rate of economic growth of the 1970's are too much to hope for in the 1980's with steady rising oil price and declining exports. Japan's current account balance swung from an all-time high surplus of \$16.5 billion in 1978 to a record deficit of \$8.6 billion in 1979.

In West Germany where the good life has become better year after year in the 1970's, economic growth figure will be spare in the 1980's with Gross Domestic Product (GDP) rate of growth expected to be only 2.1% in 1980 compared to 4.4% in 1979. Her current account balance is expected to reach a deficit of 6.9 billion ECU in 1980 as compared to a deficit of 2.7 billion ECU in 1979 and a surplus of 7.4 billion ECU in 1978.

In France, the heyday of 5% economic growth seems past. Her GDP rate of growth is expected to be only 2.1% in 1980 while her rampant rate of inflation is expected to reach 12.1% in 1980 as compared to 8.8% in 1978. Her unemployment rate is expected to be 6.9% in 1980 as compared to 5.3% in 1978.

In Italy, the GDP rate of growth for 1980 is expected to be only 2.0% as compared to 4.9% in 1979 and worst of all, her inflation rate is expected to be 17.1% while unemployment will reach 8.5% in 1980.

#### The US Share of the Pie

Government procurement discriminatory practices found among major trading partners of the US are not and will not be caused only by their poor economic performances or by their domestic pressure to promote domestic industrial growth and employment but they are also caused by the US government procurement policy itself, discussed as follows.

All US Federal Government procurement for use within the US is subject to the provisions of the Buy American Act of 1933 which provide that only domestic materials can be purchased unless: a) the required supplies are not available domestically; b) their purchase would be inconsistent with public interest; or c) the cost would be unreasonable. Furthermore, the Act specifies that foreign suppliers must meet one of two US criteria if their products are to compete on equal footing in bidding against US suppliers on government purchases. Either their products must have 50% US-made parts or the price of foreign made goods must undercut the price of the closest comparable US goods by more than 6%. Based on those two criteria, the US Bell Helicopter Division of Textron, Inc., has recently accused the US Coast Guard of being "un-American" because of its award of \$215 million for 90 helicopters to the French-owned Aerospacial Helicopter Corporation.

Even some of the states have their own law requiring state purchases from domestic suppliers. For example, the California Government Codes 4300-4305 flatly require use of both manufactured and nonmanufactured materials of US origin only. In New York, Idaho, Indiana and Kentucky bids carry a clause restricting the use of foreign products via general specification without any statutory basis.

#### Problems with GATT and the MTN Agreements

The first problem with the 1979 trade agreement on government procurement is that the President of the US is authorized to waive application of discriminatory government procurement law, such as the Buy American Act, with respect to only around 15% of US government purchases. The agreement will not affect small and minority business set-aside programs nor the requirements contained in the Department of Defense Appropriations Act which require certain goods to be purchased only from domestic producers. This is a serious loophole left by the GATT in its MTN Agreements because the US can still discriminate against foreign suppliers with the remaining 85% of her government purchases besides being able to give, for example, a 50% preference for domestic products over the lowest foreign bid, exclusive of duty, with purchases for the Defense Department. Such US discriminatory practice by the US could cause retaliation among her trading partners, leading more and more to the reliance of invisible protectionism.

Another problem with the 1979 trade agreements on government procurement is that they cover only the central government procurement. Purchases made by the states and by quasi-public or government-controlled firms are not explicitly included in the agreements. For example, Japan has not included the Electric Power Development Corporation (EPDC) in the government procurement agreements. In the European Economic Community, the agreements include all central government entities except the quasi-public ones such as the power and transportation entities and the telecommunication portions of their PTTS (Postal Télécommunication & Télégraphe). Canada excludes its Department of Communication, Transportation and Fisheries and Marine Services.

Also there could arise cases in which it was found after agreements on tariff reductions were made that they were unrealistically low but at that point it would be not only difficult but time-consuming to make changes to respond adequately and timely to changing domestic economic, social and political conditions. The tariff negotiations resulted in reductions in duties covering about \$126 billion or 90% of industrial trade between major developed countries. Over all, the tariff cut for all industrial products average to 38%.

Finally, government procurement agreements present difficult policing and enforcement problems due to the fact that compliance depends on the extent to which signatory countries are willing and able to live up to their obligations.

## Impacts and Implications for US Policy

### Impacts

Although it is practically impossible to measure exactly the impact of government procurement discriminatory practices on US exports because very little data on government purchasing data is published. Nevertheless, it is still significant to try to figure approximately the potential for US exports if the invisible barriers were abolished.

It has been estimated that if the signatory parties of the Trade Agreements Act of 1979 did live up to their obligations, the US exporters would have access to \$10.5 billion worth of central government business in the European Economic Communities, \$6.9 billion in Japan and \$1.1 billion in Canada. In exchange, the US would allow foreign suppliers to compete with US suppliers for government purchase of approximately \$12.5 billion.

Without discriminatory government procurement practices, US suppliers of computer and business machines could bid, for instance, with the French Ministry of the Economy; the German Ministry of Justice, Finance and Research and Technology; the Italian Ministry of Finance. The US suppliers of scientific and controlling instruments could cater to the French Ministries of Education, Agriculture, Health and Family; the German Ministries of the Interior, Finance and Economic Affairs; and the British Department of Environment, Transportation and Health and Social Security.

In Japan, US suppliers would be able to rely on more transparent public tendering to compete in bids for part of the purchases made by the Nippon Telephone and Telegraph (NTT), the Japanese National Railroad (JNR) and the Tobacco and Salt Monopoly for example. Together, these three entities represent about one trillion yens worth of business for US suppliers if no invisible barriers existed.

### Implications for US Policy

Agreement on government procurement will not be self-enforcing and it will be necessary for US suppliers to take advantage of the new business potential and bring complaints to the US Government for submission to the GATT in the event that violations of the agreements take place in certain countries. The US will have to take the lead not only in pursuing vigorous enforcement of her rights, but also maintaining close monitoring of the efforts by all countries to make dispute settlement mechanisms work in practice.

Also, a number of important public sector enterprises are exempted in some countries, including the US. It is important in the coming trade negotiations to consider the possibility that they should be covered. As incentive, the US Government could abolish some restrictions for the remaining 85% of its Federal Government procurement which are not now covered in the 1979 Trade Agreement Act so that other countries would follow suit. After all, trade agreements are reached and signatory countries will comply to the agreements only when and if there is reciprocity and compromise.

There must be follow-through in the post-MTN period of a GATT work program which not only results in further improvements of the police and enforcement mechanisms but also in a review of the tariff reduction schedule in a more pragmatic and realistic way so that signatory countries do not have to rely on invisible methods of protectionism to discriminate against imports in order

to shelter domestic industries, reduce unemployment and improve the balance of payments because they cannot do otherwise with tariffs.

### Conclusion

The multilateral trade negotiations and agreements on government procurement policies and practices which was made by the General Agreement on Trade and Tariff in 1979 to be applied beginning January 1981 represents a big step forward in the effort to reduce invisible barriers to world trade. However, it is important to realize that the policing and enforcement of such agreements between signatory countries remains an important issue which needs to be resolved in the 1980's. With the grim world economic outlook ahead, it is not surprising that violation of the government procurement agreement might occur in some countries. In order to promote export and compete effectively in world markets, the US manufacturers should try to take advantage of the new opportunities offered to them with the opening of some government procurement business overseas and the US Government should try to monitor constantly overseas markets to prevent violations, settle disputes and help US exporters with more information on government procurement offers for bids.

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