

ATTITUDINAL AND BEHAVIOURAL CHARACTERISTICS OF AMERICAN
AND FRENCH CANADIAN CREDIT CARD HOLDERS

Ugur Yucelt, The Pennsylvania State University
Robert M. MacGregor, Bishop's University

Abstract

This study provides insights into the characteristics and attitudinal orientations of American and French Canadian credit card holders. The data were collected in Quebec, Canada and in Vermont, U.S.A. and analyzed using the stepwise discriminant analysis technique. Questionnaires were distributed to convenient samples of 200 households in Montpelier, Vermont and an equal number in Sherbrooke, Quebec. Ninety-seven questionnaires were returned from the American sample and 107 questionnaires from French Canada. Findings indicate that French Canadian and American card holders have distinct attitudinal characteristics in holding and using credit cards. The results indicate that, in both countries, credit cards are in the growth state and further growth is expected.

Introduction

Credit cards help to increase buying power of consumers. They are widely accepted by all types of retail and service institutions and distributed to a group of qualified consumers in a form of bank credit cards and retail store credit cards.

In 1981, there were 150 million Visa and MasterCard holders with a volume of \$82.8 billion as opposed to 40 million Bank Service card and MasterCard in 1970 in the United States. In Canada, credit financing has grown from \$11.6 billion in 1970 to \$37.5 billion in 1980. The main reason for this rapid increase of owning and using credit cards is its usefulness. Consumers tend to own credit cards for (1) installment purposes and (2) convenience purposes. The installment users are low income and younger people who purchase big ticket items (appliances, stereos) with credit cards. They do not believe that credit card purchasing is more expensive than buying with cash. Commercial banks make high profit from installment users. The convenience users have high income and are older. They use credit cards for small purchases and feel that credit cards are an expensive method of buying. Commercial banks are either at the break even or they make a small profit from convenience users (Mathews and Slocum Jr. 1969; Etzel 1975).

A recent study on credit card accounts concluded that if the value of shopping time increases with respect to wage rate, consumers may prefer using credit cards which is a less-time intensive shopping method. It was found also that neither a low income, nor living in a small town or a rural area will effect owning and using a credit card (Kinsey 1981). An earlier study showed that the lifestyle portrait of credit card users is active, achievement-oriented, and exhibited a "contemporary state of mind." Both male and female users indicated a convenience-orientation towards credit cards as a satisfactory cash substitute (Plummer 1971). Awh and Waters study (1974) discussed the factors that

made a credit card holder an active or an inactive user. Both White (1975) and Hirschman (1982) analyzed some of the factors influencing consumers' decisions to use bank credit cards versus cheques and other payment systems. Finally, in 1977, Goldstucker and Hirschman looked at new market segments for local and regional retailers. These segments included transient-types to a region, tourists, conventions and business visitors, who might use credit cards instead of cash.

Published data for Canada, on the other hand, indicated that an estimated 60 percent of adult Canadians have at least one of the "Big Three" - Visa, MasterCard and American Express, and their usage is growing with the average cardholder carrying three or more cards (Perlis 1981). Three separate corporate studies, two of them of motorists (by different companies) and one by a financial institution showed beyond a doubt that French Canadians made significantly less use of credit cards. Further, they are more saving rather than investment oriented (Mallen 1977, p. 42). MasterCard was found to be more popular in Quebec than Visa. A 1982 report showed that credit card ownership is lower in Quebec than Ontario in particular, and Canada in general (*The Gazette*, February 27, 1982, p. A3). It appears that studies concerning French Canadians and their attitudes to credit card usage are virtually non-existent.

The Purpose of the Study

The purpose of this study is to examine the behavioural and attitudinal characteristics of American and French Canadian credit card holders. Given the fact that there is a more traditional attitude toward debt among French Canadians, the study will explore the reasons for these behaviours and compare them with the behaviours of Americans toward holding credit cards. The ability to develop a comparative profile of credit card users will provide additional knowledge about the French Canadian and American credit card usage behaviours. With the findings, marketers may be able to adjust their marketing strategies to accommodate for the results presented here in this paper. This type of information should be useful to numerous types of exchange agents, for example, financial institutions, service organizations, and most forms of retailers.

This study addresses three major research questions. First, are credit cards used primarily because of the "convenience" or "borrowing" power? Second, to what extent do Americans and French Canadians use their credit cards, and what are their consumer profiles, behaviours and attitudes toward owning and using credit cards? Third, are there measurable differences between two groups of consumers in holding and using credit cards?

TABLE 1

DEMOGRAPHIC PROFILE OF CREDIT CARD HOLDERS IN VERMONT U.S.A.

Data for this study were collected through self-administered questionnaires. The questionnaires were distributed on a convenience basis to selected groups of 200 households in Montpelier, Vermont in the U.S.A., and another selected number of 200 households in Sherbrooke, Quebec, Canada. Both cities are about 200 miles away from each other and have distinct characteristics with diverse economic and cultural backgrounds. Mother tongue is French in Sherbrooke, and English in Montpelier. Both samples represented all socio-economic strata in the regions. It was hoped that this fact would give a reasonable unbiased estimate of the findings. A total of 98 questionnaires were returned from the American sample allowing a 48.5 percent return rate, and 107 questionnaires from the Canadian sample giving a 53.5 percent return rate.

The French questionnaire was adapted from an earlier study (Kaynak and Yucelt 1983) and translated into French using the back-translation methodology suggested by Brislin (1970). Two fully qualified bilinguals were hired. One translated from the source to the target language. The second translator blindly translated back from the target language to the source. The investigators now had two versions in the original language, which were identical. The final target version was equivalent to the source language.

Data were analyzed using stepwise discriminant analysis technique which is a multivariate data analysis method and involves deriving the linear combination of the two or more independent variables that will discriminate at least the two priori defined groups. Essentially, the technique produces a discriminant score for each individual in the sample. The average score of each individual in one group is compared to the average score of each individual in the second group, and a comparison of group means shows how far apart are the two groups. A substantial overlap between groups indicates that a poor discriminator exists. A small overlap, on the other hand, indicates that the discriminant function separates the groups well. In general, the application and interpretation of discriminate analysis is similar to the application and interpretation of regression analysis and helped to identify the consumer's attitudes and behaviours toward credit buying in other studies (Etzel 1974; Awh and Waters 1974; Wiley and Richard 1974).

Results

The data of this study were run in the BMD computer program. It appeared that the American sample was younger, and earned less than French Canadian counterparts. The majority of respondents in both samples carried MasterCard. Visa had the second place in the French Canadian sample and the third place in the American. Sears was the second card in the American sample and the third credit card in Quebec, Canada. Tables 1 and 2 show the demographic profiles of American and French Canadian samples.

Demographic Characteristics	Total Number	% Breakdown
<u>Sex</u>		
Male	43	44.3%
Female	54	55.7
Total	97	100.0%
<u>Age</u>		
Less than 20 years old	8	8.2%
21-30	33	34.0
31-40	17	17.5
41-50	17	17.5
51-60	17	17.5
61+	5	5.2
Total	97	100.2%
<u>Income Categories</u>		
Less than \$6000	23	24.5%
\$6,001 to 10,000	17	18.1
\$10,001 to 15,000	16	17.0
\$15,001 to 20,000	8	8.5
\$20,001 to 25,000	11	11.7
\$25,001 to 35,000	8	8.5
\$35,001 to 45,000	5	5.3
\$45,000 and over	5	6.4
No answer	3	
Total	97	100.0%
<u>Occupation</u>		
Student	7	7.7%
Housewife	6	6.6
Teacher	2	2.2
Managerial	19	20.9
Professional	3	3.3
Secretary	24	26.4
Labourer	11	12.1
Nurse	15	16.5
Self Employed	3	3.3
No answer	7	
Total	97	100.0%

TABLE 2

DEMOGRAPHIC PROFILE OF CREDIT CARD HOLDERS IN QUEBEC, CANADA

Demographic Characteristics	Total Number	% Breakdown
<u>Sex</u>		
Male	58	54.2%
Female	49	45.8
Total	107	100.0%
<u>Age</u>		
Less than 20 years old	2	1.9%
21-30 years	18	16.7
31-40 years	15	13.9
41-50 years	49	45.4
51-60 years	20	18.5
61 years and over	3	2.8
Total	107	100.0%
<u>Income Categories</u>		
\$6,000 and less	11	10.2%
\$6,001 to 10,000	5	4.6
\$10,001 to 15,000	14	13.0
\$15,001 to 20,000	12	11.1
\$20,001 to 25,000	13	12.0
\$25,001 to 35,000	16	14.8
\$35,001 to 45,000	18	16.7
\$45,001 or more	18	16.7
Total	107	100.0%
<u>Occupation</u>		
Office workers	26	25.2%
Business persons	25	23.3
Teachers	19	17.7
Housewives	11	10.2
Blue collar workers	7	6.5
Self-employed	6	5.6
Students	5	4.7
Nurses	4	3.7
Lab technicians	2	1.8
Waiters	1	0.9
Babysitter	1	0.9
Total	107	100.0%

Ninety-five of the respondents in the Canadian sample (88.0%) and 58 of the respondents in the American sample (60%) owned some type of bank, retail store or gasoline company credit cards. The most common types of credit cards owned by French Canadians were MasterCard (52.8%), Visa (47.2%) and Sears (42.6%). The Americans owned MasterCard (22.1%), Visa (14.5%) and Sears (21.3%). Credit card ownership in the United States and in Quebec Canada, as well as their purposes are shown in **Tables 3 and 4.**

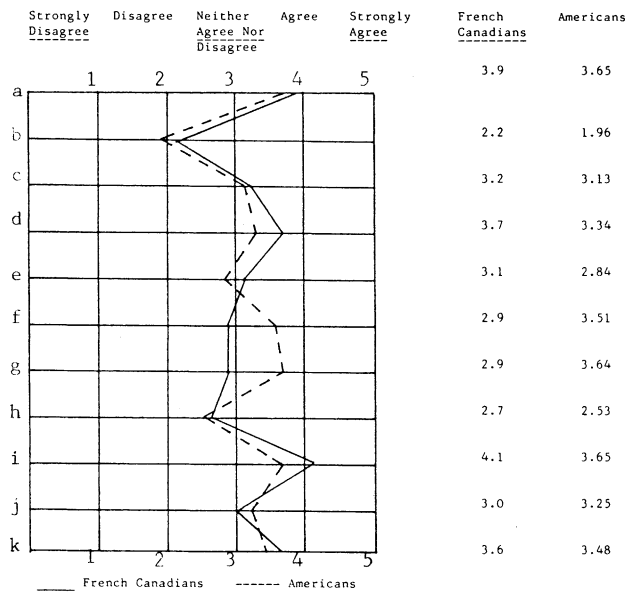
FIGURE 1

SELECTED ATTITUDINAL STATEMENTS OF FRENCH CANADIANS AND AMERICAN CREDIT CARD HOLDERS TOWARDS THE USE OF CREDIT CARDS*

Questionnaire:

- a. Credit cards are useful.
- b. The majority of your shopping is done through the use of credit cards.
- c. Credit cards are more convenient than cash or cheque.
- d. Credit cards are more convenient than cash.
- e. Credit cards are more convenient than cheques.
- f. You would make more impulse purchases when you shop with your credit card.
- g. Credit cards make it easy for you to buy things you may not really need.
- h. You use your credit card for travelling purposes only.
- i. Your credit card payments are made within 30 days.
- j. Credit cards never represent what you owe.
- k. Every day the total of debt rises through the use of credit.

Results:



*Ratings are based on a 5 point scale; 5=strongly agree; 4=agree; 3=neither agree nor disagree; 2=disagree; 1=strongly disagree.

When the data were analyzed using discriminant analysis technique, two groups were selected. The first group was the respondents who own a credit card, and the second group those who do not own a credit card. Therefore, the classification was called a two-group discriminant analysis.

The results of stepwise discriminant analysis using the data collected in Vermont indicates that the contribution of independent variables to the discriminating score is higher for variables named as MasterCard owned, other cards (gasoline

TABLE 3

CREDIT CARD POSSESSION AND USE BY VERMONT CONSUMERS

Credit Card	Respondents Own*		Used for Purchasing* Goods and Services		Used for Other Purposes	
	Number	%	Number	%	Number	%
Master Card	30	22.1	28	26.5	18	45
Visa	19	14.5	14	13.3	10	25
Magrams	2	1.5	1	0.1	---	---
Sears	29	21.3	19	18.0	3	7.5
J.C. Penney	9	6.6	7	6.8	1	2.5
M. Ward	8	5.9	6	5.8	---	---
Zayre	1	0.1	---	---	---	---
American Express	9	6.7	8	7.6	7	17.5
Others (gasoline co.)	29	21.3	23	21.8	1	2.5
	<u>136</u>	<u>100.0</u>	<u>106</u>	<u>100.0</u>	<u>40</u>	<u>100.0</u>
Average Card Ownership and use	1.74		1.09		.41	

* Total number exceeds the size of sample because some respondents own and use more than one credit card.

TABLE 4

CREDIT CARD POSSESSION AND USE BY FRENCH CANADIAN CONSUMERS

Credit Card Brands	Respondents Own*		Used for Purchasing* Goods and Services		Used for Other Purposes	
	Number	%	Number	%	Number	%
Master Card	57	24.1	47	28.1	27	36.0
Visa	51	21.6	45	25.4	31	41.3
Sears	46	19.5	36	20.3	6	8.0
Eatons	33	13.9	26	14.7	4	5.3
Canadian Tire	19	8.1	9	5.1	2	2.7
Zellers	5	2.1	4	2.3	0	0
American Express	10	4.2	7	3.4	3	4.0
Woolco	2	0.8	0	0	0	0
Other (Major Gasoline Companies)	<u>13</u>	<u>5.5</u>	<u>3</u>	<u>1.7</u>	<u>2</u>	<u>2.7</u>
	<u>236</u>	<u>100.0</u>	<u>177</u>	<u>100.0</u>	<u>75</u>	<u>100.0</u>
Average Card Ownership and Use	2.2		1.7		0.76	

* Total numbers exceed the total number of respondents. The reason for this is some respondents own and use more than one credit card.

company cards) owned, Montgomery Ward card used for purchasing goods, Sears card used for other purposes (e.g. identification), credit cards are useful, and credit cards used for impulse purchasing. **Table 5** shows the discriminating weights and their significance.

Evidence gathered from **Tables 3** and **4** demonstrated that MasterCard, Visa, and Sears were the most popular credit cards in both the United States and French Canada. In addition, respondents indicated that they used the MasterCard, Visa and Sears credit cards both for purchasing goods and services, and for identification purposes. This does not really go for all other retail and service institutions that offer their own credit cards. The average credit ownership was 2.2 cards in Quebec, Canada, and 1.4 in Vermont, U.S.A.

Credit Card Usage Behaviours

Respondents' attitudes toward credit cards were evaluated using the five-point Likert type scale. The majority of the respondents in the United States and Canada agreed that credit cards are useful, more convenient and safer than cash or checks, provided easy repayment (within 30 days), and never represent what you owe. On the other hand, American card holders disagreed with the idea that the majority of shopping may be done with credit cards. French Canadians were indifferent with this idea. They also demonstrated indifference toward whether you make impulse purchases with credit cards and you use credit cards for travelling purposes only. Although American card holders agreed that the credit cards make it easy to buy unneeded things, French Canadians disagreed with the idea. **Figure 1** shows the differences and limitations of American and French Canadians' credit card usage behaviours.

TABLE 5

DISCRIMINANT WEIGHTS AND SIGNIFICANCE FOR CREDIT CARD HOLDERS IN VERMONT

Independent Variable	Do Not Own A Credit Card	Own A Credit Card	F-Value
Master Card Own	-1.54450	4.20539	44.91
Other Cards Own	-1.32306	4.29568	47.31
M. Ward Card Use	-1.42501	3.34404	8.75
Sears Card Other Use	1.32926	7.12419	5.74
Useful	3.81242	4.92827	6.81
Impulse	3.19777	2.08679	9.13
Constant	-13.12611	-16.52423	

Overall F-Value is 31.50

In discriminant analysis, a classification matrix is also useful to develop a more accurate assessment of the discriminating weights (coefficients). It validates the discriminant function and represents on the diagonal the number of respondents who are correctly assigned to their group. The number of respondents who are off the diagonal represent the incorrect classifications. The percentages for each classification are shown at the right side and at the bottom of the matrix. **Table 6** shows the classification matrix for credit card holders in Vermont.

TABLE 6

CLASSIFICATION FOR CREDIT CARD HOLDERS IN VERMONT

Actual Group	Predicted Group		Actual Total	% Correct
	Do Not Own Credit Cards	Own Credit Cards		
Do Not Own Credit Card	38	0	38	100
Own Credit Card	3	50	53	97.3
Predicted Total	41	50	91	96.7

In the discriminant analysis, the hit-ratio (percent correctly classified) refers to R²-Value in regression analysis and indicates how well the discriminant score was explained by the independent variables. The hit ratio of this study is 96.7 and obtained as following:

$$\text{Hit ratio} = 100 (38 + 50) / 91 = 96.7$$

Regarding the classification procedure, the next procedure involves determining the percent of individuals that would be correctly classified by chance. The chance classification is rather important when the group sizes are unequal. The formula to compute the chance criteria is:

$$C \text{ proportional} = P^2 + (1-P)^2$$

where

P = the proportion of individuals in group 1
 1-P = the proportion of individuals in group 2

Substituting the appropriate numbers, we obtain:

$$C = (.42)^2 + (.58)^2$$

pro

$$= .18 + .34$$

$$= .52$$

The classification accuracy of 96.7 percent is higher than the proportional chance criteria of 52 percent and can be considered a valid predictor of classification for credit card holders versus non-holders. Therefore, it appears that credit card holders in Vermont carry MasterCard and gasoline company cards, tend to use the Montgomery Ward card for purchasing goods and the Sears card for other purposes (identification), and agreed that credit cards are useful; however, they do not generally use their credit cards for impulse purchasing.

Similarly, the data gathered in Quebec have been broken down into two groups: (1) Own a credit card, and (2) do not own a credit card. The discriminant weights of the independent variables Sears credit card, credit card is useful, repayment within 30 days, credit cards don't represent what consumers owe and income is higher within the group of French Canadian credit card holders. **Table 7** shows the

discriminant weights of credit card holders in Quebec, Canada.

TABLE 7

DISCRIMINANT WEIGHTS OF CREDIT CARD HOLDERS IN QUEBEC, CANADA

Independent Variables	Do Not Own Credit Card	Own Credit Card	F-Value
Sears Card Own	1.57522	4.78212	9.7930
Credit Card Is Useful	3.57949	12.03849	9.4695
Repayment Within 30 days	1.18685	3.49865	64.8989
Does Not Represent What You Owe	1.38133	2.06743	4.3373
Income	0.93863	1.55186	9.4367
Constant	-20.75454	-42.25903	

Overall F-Value is 24.296

The hit ratio is 94.4% and the classification accuracy (chance classification) is 84.6% and considered as a valid predictor of classification for credit card holders versus non-holders in Quebec, Canada.

TABLE 8

CLASSIFICATION MATRIX FOR CREDIT CARD HOLDERS IN QUEBEC, CANADA

Actual Group	Do not Own		Actual Total	% Correct
	Credit Card	Card		
Do not own Credit Card	9	3	12	75
Own Credit Card	3	92	95	96.8
Predicted Total	12	95	107	94.4

It seems that income is a significant determinant in owning a credit card in Quebec, Canada. Quebecers prefer to own Sears credit card, and believe that the card is useful. Also, they enjoy the 30 days repayment policy that owning a credit card allows. In general, however, French Canadians believe that the monthly statement does not represent what they owe.

Summary and Conclusions

This study of credit card holding behaviours among French Canadians and American consumers demonstrated that the two groups show distinct patterns in attitudes toward owning and using a credit card. While both groups feel that credit cards are, in general, useful, the differences in cultural and socio-economic characteristics of the two samples may contribute to the behavioural differences of respondents in Vermont, U.S.A. and Quebec, Canada. For example, the American consumers felt that they can make more impulse purchases with credit cards, the French Canadians do not as a result of more

traditional attitudes toward debt in Quebec. However, the Quebec consumers seemed to enjoy 30 days repayment policy of credit card purchasing, and felt that credit cards never represent what consumers owe. Also, income is an important factor in owning a credit card in Quebec.

In summary, this study indicates that cultural and socio-economic differences have a significant effect in using credit cards. Since respondents in both samples felt that credit cards are useful, it seems that credit cards are in growth stage and further growth can be expected. Banks and retail stores, therefore, should emphasize the usefulness of credit cards and encourage their customers to use credit cards more often. This may require providing adequate service and accurate billing procedures in their accounting systems. Consumer confidence may increase the total number of card holders and card users in both sections of North America.

References

- Adcock, William O., Elizabeth C. Hirschman and Jac. L. Goldstucker, "Bank Credit Card Users: An Updated Profile," in William D. Perrault (ed) Advance in Consumer Research, Vol. 4, 1977, Atlanta, pp. 236-241.
- Awh, R.Y., and Waters, D., "A Discriminant Analysis of Economic, Demographic, and Attitudinal Characteristics of Bank Charge Card Holders: A Case Study," Journal of Finance, Vol. 24, (June 1977), pp. 973-980.
- Bartos, Rena, "Over 49: The Invisible Consumer Market," Harvard Business Review (January-February, 1980), pp. 140-148.
- Boyle, Eleanor, "Plastic Money Revolution Leaves Montrealers Cold," The Gazette, (February 27, 1982) p. A3.
- Brislin, R.W., "Back Translation For Cross-Cultural Research," Journal of Cross-Cultural Psychology, Vol. 1, No. 3, (September 1970), pp. 185-216.
- "Credit Card Book," Canadian Banker, Vol. 85, No. 5 (October 1978), p. 37.
- Etzel, Michael J., "Using Multiple Discriminant Analysis to segment the Consumer Credit Market," American Marketing Association Fall Conference, 1974, p. 2.
- Gobel, Ross L., "New Psychometric Measurements for Consumer Credit Behaviour," American Marketing Association Fall Conference Proceedings, 1969, pp. 368-376.
- Goldstucker, J.L., and Hirschman, E.C., "Bank Credit Card Users: New Market Segment for Regional Retailers," MSU Business Topics, (Summer 1977), pp. 5-11.
- Hair, J.F., Jr., R.E. Anderson, R.L. Tatham, and B.J. Grabrowsky. Multivariate Data Analysis, Tulsa, Oklahoma; Petroleum Publishing Co., 1979.

Hawes, Douglass K., Rodger D. Blockwell and W. Wayne Talarzyk, "Attitudes Toward Use of Credit Cards: Do Men and Women Differ?" Baylor Business Studies, pp. 57-71.

Hirschman, E.C., "Consumer Payment Systems: The Relationship of Attribute Structure to Preference and Usage," Journal of Business, Vol. 55, No. 4, 1982, pp. 531-545.

Kaynak, K.E., and Yucelt, U., "Credit Card Usage Behavior: Some Insights From Nova Scotia, Canada," Developments in Marketing Science, edited by J.C. Rodgers, III, A.M.S., Vol. VI, (May 1983), pp. 78-82.

Kinsey, Jean, "Determinants of Credit Card Accounts: An Application of Tobit Analysis," Journal of Consumer Research, Vol. 8 (September 1981), pp. 172-182.

Levey, Signey J., "Consumer Views of Bank Services" Journal of Bank Research, Vol. 4, No. 2, Summer 1973.

Mallen, Bruce, French Canadian Consumer Behavior: Comparative Lessons From The Published Literature and Private Corporate Marketing Studies, Montreal, The Advertising and Sales Executives Club of Montreal, 1977.

Mathews, H. Lee and Slocum, John W., Jr., "Social Class and Commercial Bank Credit Card Usage," Journal of Marketing, Vol. 33, No. 1, January 1969, pp. 21-22.

Morgan, James N., "Family Use of Credit," Journal of Home Economics, Vol. 60, No. 1, January 1968, pp. 21-22.

Parry, David, "The Card Game," Weekend Magazine, (January 6, 1979), pp. 10-13.

Perlis, M., "The Future of Plastic Money," Business Quarterly, (Summer 1981), pp. 76-80.

Plummer, J.T., "Lifestyle Patterns and Commercial Bank Credit Card Usage," Journal of Marketing, Vol. 35 (April 1975), pp. 35-41.

Salter, Michael, "Competition Heats up in Lucrative Corporate Credit-Card Market," The Financial Post (June 9, 1984), p. 18.

Slocum, Jr., J.W., and Mathews H.L., "Social Class and Income as Indicators of Consumer Credit Behavior," Journal of Marketing, (April 1970), pp. 69-74.

White, K.E., "Consumer Choice and Use of Bank Credit Cards: A Model and Cross-Section Results," Journal of Consumer Research, Vol. 2, (June 1975), pp. 10-18.

"Why Big Stores Are Taking Outside Credit Cards," Business Week, (September 3, 1979), pp. 132-134).