A Path Analytic Model of Store Loyalty Involving Self-Concept, Store Image, Geographic Loyalty, and Socioeconomic Status

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INTRODUCTION

Store loyalty is perhaps the singular most important concept for the retailer. It indicates the "competitive advantage," in Alderson's (1957) terminology, or "the monopoly power," in Chamberlain's (1963) terminology. If the retailer could determine the nature and degree of loyalty, he/she could attempt to develop better retail strategies in order to increase or maintain satisfactory levels of store sales.

In recent years, there has been a number of attempts to analyze store loyalty. Reynolds, Darden, and Martin (1974), found store loyalty related to *psychographic variables* (Plummer 1974). Reynolds et al. demonstrated store loyal customers are time conscious, and they like to shop locally. Other attempts have related store loyalty to *socioeconomic characteristics* (Enis and Paul 1968; Mason and Mayer 1973; Samli 1976).

Another research track involving the determinants of store loyalty is *store-image* (Hirschman 1981). Perhaps the earliest, and most widely cited,

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works in respect to store-image were generated by Pierre Martineau (1958). He maintained store loyalty is a function of store-image. If individuals have a favorable image of the store, they are likely to develop a certain degree of loyalty commensurate to the favorableness of the image. Following Martineau's lead, a large number of studies have been conducted which explored the finer points of the store-image construct (Jenkins and Forsythe 1980; Lessig 1973).

More recently, there have been attempts made to establish a relationship between *self-concept and store-image interaction* and store patronage and loyalty (Sirgy 1982). Stern, Bush and Haire (1977) demonstrated consumers shop at stores whose images are similar to their own actual and ideal self images. In another study, Bellenger, Steinberg and Stanton (1976) found self-image/store-image congruity as a significant predictor of store loyalty. Dornoff and Tatham (1972) found shopper's ideal self-image was more important in the selection of a department store than their actual self-image and their image of "best friend." The actual self-image was found to be more influential in the choice of a supermarket, and the image of "best friend" was shown to be most predictive of specialty stores.

Still another research track in store patronage/loyalty involves *geographic* factors. Samli (1979) examined intermarket shopping—or "out shopping"—in two surveys conducted seven years apart. The findings indicated consumers residing in a small college town were "more satisfied" with their local shopping facilities subsequent to the construction of a new shopping mall. Nevin and Houston (1980) worked with travel distance as a key variable in determining attraction to intra-urban shopping areas, and shopping area image in predicting attitude toward the shopping area.

Samli and Sirgy (1981) conducted a study to test the multidimensionality notion of store loyalty. Specifically, store loyalty was regressed on self-image/store-image congruity (social- and ideal social-congruities)[1], evaluation of store-image[2], socioeconomic status, area loyalty, and shopping-complex loyalty.[3] The results showed store-image evaluations accounted for a significant and major portion of the predicted variance in store loyalty. The tendency to shop in specific geographic regions (area loyalty and shopping-complex loyalty) were found to be significant predictors of store loyalty but, accounted for a negligible portion of the predicted variance. However, the mere inspection of the pattern of correlations revealed, although self-image/store-image congruity failed to significantly predict store loyalty scores, the congruity variables (social congruity and ideal social congruity) were significantly correlated with store-image evaluations. Also, socioeconomic status was found to correlate significantly with the variables

involved in the tendency to shop in specific geographic regions (area loyalty and shopping-complex loyalty).

Based on the findings of the Samli and Sirgy study (1981), a *path analytic* model of store loyalty was proposed. The *purpose* of this study is threefold: (a) to formally introduce the "causal" model of store loyalty and argue its logical ramifications, (b) to test the model using a path analytic technique, and (c) to provide further validation of the model by conducting a replication study.

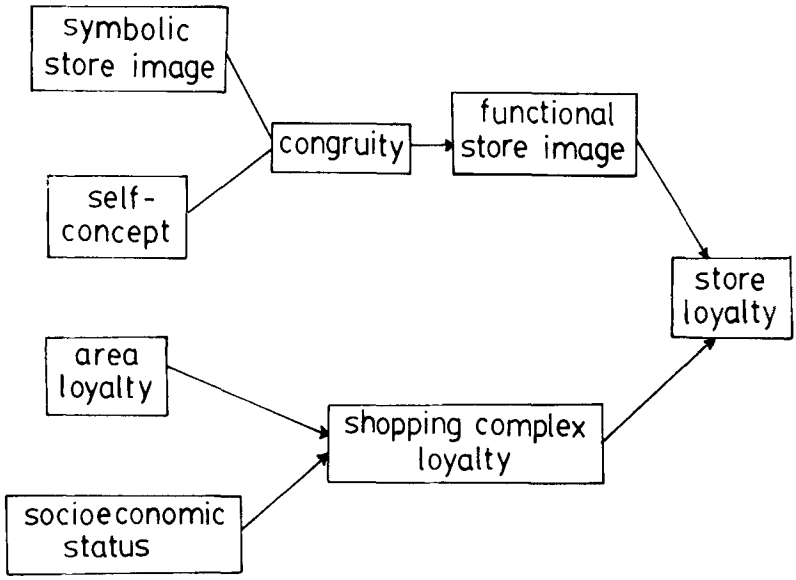

Figure 1: A "causal" model of store loyalty.

THE MODEL

Figure 1 illustrates the basic model used in this study. The model posits store loyalty is primarily determined by functional store evaluation and shopping-complex loyalty. In turn, functional store image evaluation is determined by self-image/store-image congruity, whereas shopping-complex loyalty is determined by area loyalty and socioeconomic status.

Definitions of the Model's Constructs

Symbolic Store-Image: This construct refers to the stereotypic personality-image which shoppers have of a specific retail store. Examples of stereotypic personality-images people may have of a particular store included traditional versus modern, classy versus folksy, friendly versus formal, high status versus low status, etc. (Martineau 1958). These symbolic images should be differentiated from those functional images shoppers may have of a particualr store. Functional store-images are characterized by those aspects of the store which are mostly reflected in the tangible characteristics of the store, e.g., clean versus dirty, quiet versus noisy, etc. (Samli and Sirgy 1981).

Self-Concept: This variable usually refers to more than one different self-perspective. Self-concept investigators have used this construct to denote actual self-image (how a person sees himself/herself), ideal self-image (how a person would like to see himself/herself), social self-image (how others see him/her as), ideal social self-image (how a person would like others to see him/her as), etc. (Sirgy 1982).

Self-Image/Store-Image Congruity: This concept refers to the match or mismatch of one or more actual self-image, ideal self-image, social self-image, or ideal social self-image with the corresponding personality-images of the designated store. The match between actual self-image and store image (or product image) has been referred to as "self-congruity", between ideal self-image and store-image as "ideal congruity", between social self-image and store-image as "social congruity", and between ideal social self-image and store-image as "ideal social congruity" (Sirgy 1982). The congruence between these two sets of constructs (store or product image and self-concept) has been modeled using a variety of distance measures such as, the Euclidean distance, absolute difference, simple difference, and difference squared indices (Birdwell 1968; Dolich 1969; Ross 1971; Schewe and Dillon 1978; Sirgy 1980; Sirgy and Danes 1982).

Evaluation of Functional Store Image: This denotes a summative attitudinal disposition towards the perceived functional images of a particular store. As previously stated, functional store-images refer to those images encoded in the shopper's mental framework based on those *functional* attributes of the store, i.e., store pricing, product variety, personnel treatment (Lindquist 1974-75). Weale (1961) defined this construct in terms of how well the store meets the customer's aspiration level with regard to price, quality, and service. Oxenfeldt (1974-75) considers the image to be a "combination of factual and emotional" attributes. This viewpoint, which

parallels Martineau's (1958) definition, stresses many shoppers will hold factually based opinions about a store, and will also feel confident about those opinions. Store image, as an aggregation of all consumer images of a particular store, has been used repeatedly by such retail investigators as Samli (1968, 1975, 1976), Berry (1969), Jenkins and Forsythe (1980), and Wyckham (1967).

Socioeconomic Status: This construct refers to social class which is defined as relatively permanent and homogeneous divisions in a society in which individuals or families who share similar values, life styles, interest, and behavior can be categorized (Coleman and Rainwater 1978).

Area Loyalty and Shopping Complex Loyalty: Refers to the tendency to shop in a specific geographic region, a shopper's propensity to limit his/her shopping in a specific area (town or city, or specific portion of a city such as a particular suburb) and/or a specific shopping-complex e.g., shopping mall or surrounding stores. Therefore, one can further decompose geographic loyalty into *area loyalty* and *shopping-complex loyalty*, these constructs have not been previously used by retail investigators.

Store loyalty: This is defined as a biased, behavioral response, expressed over time, by some decision-making unit, with respect to one or more alternative stores out of a set of such stores, and as function of psychological process (Jacoby and Kyner 1973). It was asserted that consistent repurchase, by itself, may not be a sufficient indicator of loyalty. Some form of psychological commitment on the part of the customer is also a necessary ingredient of true store loyalty. Other researchers maintained frequency of patronage and recency of store visits are sufficient indicators in the measurement of store loyalty (Samli 1975).

Hypothesized Causal Relations

Hypothesis 1: Store-image evaluation is a positive function of self-image/store-image congruity (social congruity and ideal social congruity).

Hypothesis 2: Store loyalty is a positive function of store-image evaluation.

The model posits the *match* or congruity between a particular store's symbolic image and a shopper's self-image (actual self, ideal self, social self, or ideal social self) resulting in self-image/store-image congruity, will bias the shopper's perception and evaluation of the store's functional image. The more *conscious* evaluation of the functional attributes of a particular store will, in turn, influence the shopper's loyalty to that store. In other

words, the self-image/store-image congruity influences are argued to operate at a more implicit or less *conscious* level which influences the shopper's conscious perception and evaluation of the store's functional attributes (Mason and Mayer 1973).

Markus (1980) argued personality-images associated with the individual self (self-perceptions) and those associated with "others" (person-perception) are cognitive schemas organized at higher-levels in the cognitive hierarchy. Cognitive schemas high on this hierarchy are referred to as *abstract* schemas, and those which are low on the same hierarchy are referred to as *concrete* schemas (Abelson 1976; Anderson 1980; Neisser 1976). Abstract schemas are more accessible and become easily activated under conditions of high familiarity. The allocation of cognitive processing or effort for abstract schemas is minimal relative to concrete schemas (Alderson 1957; Wyer and Carlson 1979). Once an abstract schema is activated and processed, the same schema can be subjected to a decompositional procedure in which less abstract and more concrete schemas are generated from the abstract ones.

This social cognition theory can, therefore, be used to explain the relationship between self-image/product-image congruity, functional store-image evaluation, and store loyalty. The self-image/product-image congruity variable involves abstract cognitive schemas which become activated and processed at a less conscious level. This is then followed by the decompositional process by which specific functional store-image attributes are generated and consequently evaluated. The overall evaluation of the store's functional attributes may in turn, determine store loyalty behavior.[4]

A positive relationship is expected between ideal social congruity (and social congruity) and functional store-image evaluation. A positive relationship is also expected between functional store-image evaluation and store loyalty (Mason and Mayer 1970).

Hypothesis 3: Shopping-complex loyalty is a positive function of area loyalty and a negative function of socioeconomic status.

Hypothesis 4: Store loyalty is a positive function of shopping-complex loyalty.

With respect to the theoretical justification of the interrelationship of socioeconomic status, area loyalty, shopping-complex loyalty, and store loyalty, it has been demonstrated lower socioeconomic consumers may express more loyalty to specific in-town shopping complexes compared to higher socioeconomic consumers (Samli 1979). Lower socioeconomic consumers cannot afford to "out shop" and are, by definition, more restricted in terms of geographic mobility. This proposition is also supported by social

class theory (Coleman and Rainwater 1978); higher social- class people exhibit greater social mobility (geographic mobility included) than lower social- class people. Therefore, a negative relationship between socioeconomic status shopping-complex loyalty is expected.

Shopping-complex loyalty is determined by area loyalty. This is simply due to the containment variation. Those who express high loyalty to a specific geographic region (e.g., town) may also express loyalty to a specific shopping-complex. The same argument can be applied to the relationship between shopping-complex loyalty and loyalty to a specific store within that shopping-complex facility. The same phenomenon was observed between store loyalty and brand loyalty. Frank, Massey, and Lodahl (1969) and Frank (1967), based on toilet-tissue purchasing behavior for 3,206 members of a panel, found a relationship between brand loyalty and store loyalty (Carman 1970).

A positive relationship is expected between area loyalty and shopping-complex loyalty, and between shopping-complex loyalty and store loyalty.

Summary of Definitions of Model's Constructs

1. Symbolic store-image = stereotypic image of the generalized (typical) user of a particular retail store.
2. Self-concept = involves a variety of self-perspective such as, actual self-image, ideal self-image, social self-image, and ideal social self-image.
3. Social self-image = refers to how the consumer believes others view him/her.
4. Ideal social self-image = refers to how the consumer would like others to view him/her.
5. Self-image/store-image congruity = refers to the degree of match between the symbolic store-image and a given self-perspective (e.g., social self-image) along one or more image dimensions.
6. Social congruity = refers to the degree of match between the symbolic store-image and social self-image along one or more image dimensions.
7. Ideal social congruity = refers to the degree of match between the symbolic store-image and ideal social self-image along one or more image dimensions.
8. Store image evaluation = refers to the summative attitude toward the functional or utilitarian attributes of a particular store.

9. Socioeconomic status = refers to the social class position of consumers.
10. Area loyalty = refers to the disposition of consumers to shop repeatedly in a given community.
11. Shopping-complex loyalty = refers to the disposition of consumers to shop repeatedly in a given shopping-complex.
12. Store loyalty = refers to the disposition of consumers to shop repeatedly in a given store.

METHODOLOGY

Two data sets were gathered from two different stores located in a southern, university town. The first data set was collected from an intercept sample of people who patronize a discount department store (study I). The second data bank came from an intercept sample of shoppers who patronize a clothing department store (study II - replication).

Sample Population and Sampling Method

A systematic sample of 256 adult shoppers was intercepted and interviewed as they came out of the discount department store. The sample was taken by interviewing every third customer. The interviews were spaced throughout the week and through the course of the day to maximize sample representativeness.

The replication study involved 115 respondents who were interviewed as they were entering or departing a specialty clothing store in that same, southern university town. The same sampling procedure was used in the replication study.

The Functional Store-Image Measures

Kelly and Stephenson (1967) first proposed the use of the semantic differential in the measurement of store-image. Many investigators followed their lead in the measurement of store-image (Albaum and Dickson 1977; McDougall and Fry 1974-75; Pathak, Crissy and Sweitzer 1974-75; Samli and Sirgy 1981; Wyckham 1967).

To measure the functional store-image construct, a measure previously used by Samli (1976), Lincoln (1978), Samli and Sirgy (1981) was used. This measure is composed of seven factors. These factors are: general store characteristics, physical characteristics, price, personnel, promotion, convenience, product and services. Twenty semantic differential scales were

used to measure these seven factors. Although the reliability and validity of this measure have been demonstrated by Lincoln (1978), Samli (1976), and Samli and Sirgy (1981), further analyses were undertaken in the present study to reexamine the reliability and validity of the factor structure of this scale. A varimax factor analysis was conducted on the two data sets. The results of the factor analysis were mostly consistent with the hypothesized factor structure minor deviations. A Chronbach Alpha reliability analysis was conducted on each factor containing two or more indicators, and the results from the two date sets were generally supportive of the internal consistency of the factors. Reliability coefficient varied from .56 to .87.

To determine the overall functional store-image evaluation score per respondent, a summative index was used. In doing this, all the semantic differential scales were transformed in such a way the positive poles of the scales indicated a favorable image. Therefore, the sum total score reflects the extent to which a given respondent has a favorable or unfavorable evaluation of the store, based on the store's functional attributes.

The Symbolic Store-Image Measure

In a preliminary procedure, a list of approximately 50 possible personality attributes associated with general retail stores was gathered from a convenience sample of eight subjects. Subjects were asked to write down the personality traits of those shoppers who frequently patronize the two stores selected for this study. Their responses were then subjected to a content analysis. The four most consensual and nonredundant attributes were accordingly selected; these were modern versus traditional, friendly versus formal, classy versus folksy, and casual versus sophisticated.

These bipolar adjectives were then used in a semantic differential format to measure the symbolic store-image. A factor analysis was performed to test the factor independence of these attributes. The results based on the two data sets showed the modern versus traditional attribute was loading highly with the friendly versus formal on one factor, and the classy versus folksy and the casual versus sophisticated were loading highly on another factor. This method in measuring symbolic store-image (and symbolic product-image) was used in many self-concept investigations (Sirgy 1982).

The validity of this measure rests primarily on the nomological testing of the model. The empirical support for the hypotheses would automatically lend nomological validity to the measures employed. In the context of this study, it can be argued the symbolic store-image measure has nomological validity.

The Self-Concept Measures

Using the well-established procedure in self-concept investigations, the same attributes used to measure the symbolic store-image were also used to measure self-concept. In this study, two self-perspectives were used — the social self-image and the ideal social self-image. The same form of semantic differential scales were used twice, once to measure social self-image and again to measure ideal social self-image.

The verbal cue for measuring social self-image was: "To what extent do you think people see you as being. . . ." The verbal cue used for measuring ideal social self was: "Two what extent would you *like* people to see you as being. . . ."

No internal consistency testing was considered or administered for these measures because theory does not warrant this kind of testing. Remember we are interested in the congruity *between* the self-concept measures and the symbolic store-image measures and not exclusively the self-concept measures. From this theoretical perspective, internal consistency type of reliability testing is senseless. Temporal stability as a measure of reliability is the ideal form of reliability testing under these conditions. Due to the nature of the sample and cost constraints, test-retest type of procedure was out of the question. Therefore, the only criteria for reliability and validity we are left with, in relation to the self-concept measures, is nomological validity. And in this case, we *did* have it.

Self-Image/Store-Image Congruity

Based on the works of Sirgy (1979, 1980, 1982) in the area of consumer self-concept, the generalized absolute difference congruence has been demonstrated to be most predictive of product preference and purchase intention, compared to other distance models. Therefore, the generalized absolute difference congruence model was used to obtain scores for *social congruity* (comparison between symbolic store-image and social self-image — the lower the score the higher the congruity and vice versa) and *ideal social congruity* (comparison between symbolic store-image and ideal social self-image).

Social congruity was calculated by the sum of the absolute differences between symbolic store-images (STI) and social self-images (SSI). Mathematically formulated, a social congruity score (SC) for and individual respondent (k) was derived as follows:

$$SC_k = \Sigma \, |STI_{ik} - SSI_{ik}|$$

Ideal Social Congruity (ISCk) representing the interaction between symbolic store-image (STIi) and ideal social self-image (ISSI) was similarly formulated as

$$ISC_k = \Sigma \, |STI_{ik} - ISSI_{ik}|$$

Socioeconomic Status Measures

Socioeconomic status in this study was measured by the Segmentation Index (SI) (Samli 1968, 1975, 1976) used in Samli's studies from which the SI measures, reliability and validity, were already demonstrated. Following the basic pattern of earlier studies, an SI score is developed by using the sum of income level, luxury items, house payments, credit cards, hobbies, and occupation. Differential weights are assigned to each factor. An SI score was calculated for each respondent.

Area Loyalty Measures

One indicator of area loyalty was used in this study. The respondents were asked to state the percentage of their total retail purchasing done in the area. Responses were recorded on a 4-point rating scale ranging from less than 25% to more than 75%. Because of the single indicator measure of area loyalty, no reliability testing (internal consistency) was performed. It is *assumed* to be high. However, we can partly rely on the nomological validity of this measure.

Shopping-Complex Loyalty Measure

Shopping-complex loyalty was assessed using a measure similar to area loyalty, but was directed at the shopping-complex and not the town area. Again, as with the area loyalty measure, only one indicator was used in the measurement of this variable and because of this, no internal consistency type of reliability was ascertained. As with the area loyalty measure, we unfortunately must rely on the measure's nomological validity.

Store Loyalty Measures.

Store loyalty was measured by using two indicators. The first indicator measured the frequency of shopping visits to the particular store. A 5-point rating scale varying from twice a week, or more, to less frequently (than once a month) was used. It was assumed that the people who visit a store more often are more loyal to that store. The other indicator measured on a 5 point Likert scale, the consumer's willingness to go to that specific store whenever the need arises. It was assumed, high willingness to revisit the same store whenever the need arises is indicative of store loyalty (Bellenger, Steinberg, and Stanton 1976). These two indicators were equally weighted and summed to determine each respondent's general loyalty to the store in question. The correlation between these two indicators was high for both sets ($r = .603$ for Study I and $r = .725$ for Study II).

Design and Analysis

Through path analysis, systematic and simultaneous evaluation of *system of nonmanipulated* variables which are suspected to exhibit causality, can be accomplished. Path analysis, although based upon correlations, allows us to evaluate a system of nonmanipulated variables measured in their naturalistic setting from which "causal" interferences might be approximated. Path analysis, in this respect, performs several functions.

First, it attempts to find out whether a hypothesized cause does in fact have an effect. This is done by computing *path coefficients* (r) between the cause variable(s) and the effect variable. Path coefficients are estimated by partial standardized regression coefficients.

Second, path analysis analyzes the correlation between the cause and effect variables into its component *causal direct effects, causal indirect effects,* and *noncausal effects*. Indirect effects may occur in several ways. When causes are correlated, each cause has a direct effect on the dependent variable, as well as an indirect effect through the correlations with other causes.

Third, path analysis is also used for *theory testing*. Through its application, one can determine whether or not a pattern of correlations for a set of observations is consistent with a specific theoretical formulation. As shown above, a correlation between two variables can be expressed as a composite of direct and indirect effects of one variable on the other. Using path coefficients, it is therefore possible to reproduce the correlation matrix (R) for all the variables in the system. By deleting certain paths, the researcher is offering a more parsimonious causal model. If, after the deletion of some

paths, it is possible to reproduce the original R matrix, or closely approximate it, then the conclusion would be that the pattern of correlations in the data is consistent with the more parsimonious model (Kerlinger and Pedhazur 1973).

The investigators did *not* use LISERAL to conduct the path analytic procedure because of the possible confound stemming from underidentification associated with the lack of multiple indicators. In this study, except for the two indicators of store loyalty, most of the model's constructs were measured multidimensionally with each dimension having *one* indicator.

The testing of the store loyalty model through path analysis was performed in two stages. Stage 1 involved setting up the full model (i.e., model with all possible connections) and deriving the path coefficients for all possible links. Then, those paths which show nonsignificant path coefficients are deleted. The trimmed (parsimonious) model is expected to closely correspond to the proposed store loyalty model.

Stage 2 of the analysis involved obtaining path coefficients for the proposed model (which should be the same or close to the trimmed model) and subjecting those path coefficients to a decompositional analysis into direct and indirect causal effects and noncausal association. The total predicted effects (reproduced correlations) are then compared with the obtained or zero-order correlations to test the model for a goodness-of-fit. A theoretically sound model is expected to show nonsignificant discrepancies between the predicted and obtained correlations.

RESULTS

Table 1 shows a correlation matrix, as well as other descriptive statistics involving the model variables. These are store loyalty (SL), socioeconomic status (SES), social congruity (SC), ideal social congruity (ISC), area loyalty (AL), shopping-complex loyalty (SCL), and store-image evaluation (SIE). Table 2 shows the same statistics involving the replication study.

Figure 2 represents a path model involving all causal relations based on the full model (SL as a function of SC, ISC, AL, SES, SIE, and SCL; SL as a function of SIE and SCL; SIE as a function of SC, ISC, AL and SES; SCL as a function of SC, ISC, AL and SES).

The results show 28.50% of the total variance in SL scores was accounted for by SC, ISC, AL, SES, SIE, and SCL,. Of those, only SIE and ISC were significant ($p < .05$). The results of the replication study provided further substantiation to this finding. SL was found to be significantly and

Table 1

Zero-Order Correlations, Means, and Standard Deviations of Variables Involved in Study I (N = 256)

Variables	Zero-Order Correlations							Means	Std. Dev.
	SL	SES	SC	ISC	AL	SCL	SIE		
SL		-.124	-.249**	-.306***	.183*	.173*	.493***	5.832	1.938
SES			.107	.075	.044	-.181*	-.121	25.562	9.302
SC				.776***	-.012	-.126	-.298***	4.269	2.609
ISC					-.124	-.092	-.424***	5.078	2.913
AL						.434***	.057	2.730	1.165
SCL							.080	1.820	.974
SIE								67.660	10.011

Note: SL = Store Loyalty
SES = Socioeconomic Status
SC = Social Congruity
ISC = Ideal Social Congruity
AL = Area Loyalty
SCL = Shopping-Complex Loyalty
SIE = Store Image Evaluation

* $p < .10$
** $p < .05$
*** $p < .01$

Table 2

Zero-Order Correlations, Means, and Standard Deviations of Variables Involved in Replication Study (N = 115)

Variables	Zero-Order Correlations							Means	Std. Dev.
	SL	SES	SC	ISC	AL	SCL	SIE		
SL		.024	-.106	-.080	.106	.239*	.393***	5.232	1.633
SES			.064	-.016	-.079	-.191*	-.020	27.183	4.780
SC				.806***	.129	.126	-.157*	4.704	2.442
ISC					.120	.146	-.265***	4.548	2.352
AL						.647***	-.095	2.496	1.079
SCL							.007	2.035	.917
SIE								73.000	10.144

Note: SL = Store Loyalty
SES = Socioeconomic Status
SC = Social Congruity
ISC = Ideal Social Congruity
AL = Area Loyalty
SCL = Shopping Complex Loyalty
SIE = Store Image Evaluation

* $p < .10$
** $p < .05$
*** $p < .01$

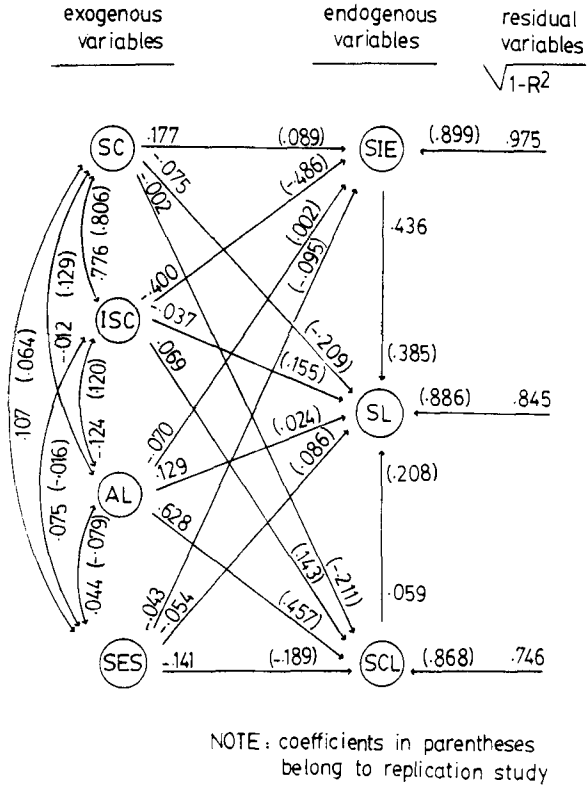

Figure 2: The full model.

strongly predicted by SIE and SCL ($p < .05$) but not by SC, ISC, AL, and SES.

Also, as expected SIE was found to be significantly influenced by ISC ($r = -.400$, $p < 01$) but not SC, AL, and SES ($r = .177$, $r = -.070$, $r = -.043$, respectively and all nonsignificant, $p > .10$). ISC accounted for .080 r^2 change in the .085 total predicted variance in SIE scores. The replication study produced a similar pattern of results. The replication study also showed that SIE was primarily predicted by ISC ($r = -.395$, $p < .01$).

Also as expected, SCL was found to be significantly influenced by AL ($r = .628$, $p < .01$) and SES ($r = -.141$, $p < .01$) whereas the ISC and SC variables were nonsignificant ($r = .069$ and $r = -.002$, respectively, $p > .10$). The replication study added further support to this finding (AL; $r = .457$, $p < .01$; and SES: $r = -.189$, $p < .05$; ISC: $r = .143$, $p > .10$; SC: $r = -.211$, $p < .10$).

These results involving stage 1 of the analysis provided strong support for the proposed model. Stage 2 of the analysis involved the decompositional analysis performed on the proposed model (and, in this case, according to the results of stage 1 analysis, is fairly equivalent with the trimmed or empirically derived model). The path coefficients of the proposed model are shown in Figure 3.

The proposed parsimonious model posits that SL is a function of SIE and SCL, where SIE is a function of ISC, and SCL is a function of AL and SES. This parsimonious model is tested by decomposing the correlations among the parsimonious model variables and comparing the predicted total association (sum of causal and noncausal association) with that of the obtained association (zero-order correlations). The parsimonious model is determined to be successful only when the predicted total association based on the relations presented in the parsimonious model are not found to be significantly discrepant from the obtained zero-order correlations. This is shown in Table 3 for the first study and Table 4 for the replication study.

As shown in Tables 3 and 4, the reproduced (or predicted) correlations are not highly discrepant from the obtained zero-order correlations. However, we do not have to count on the mere inspection of the difference, we can test whether these discrepancies are significantly different from zero. This is done by using chi-square test for assessing whether the discrepancy between estimated (predicted) and obtained correlations for the parsimonious model as a whole is beyond chance.[5] In this case, the computed chi-square was $X^2(6) = 10.5$ and 8.0 for study I and study II, respectively ($p > .05$). Therefore, it can be said that the parsimonious model does fairly

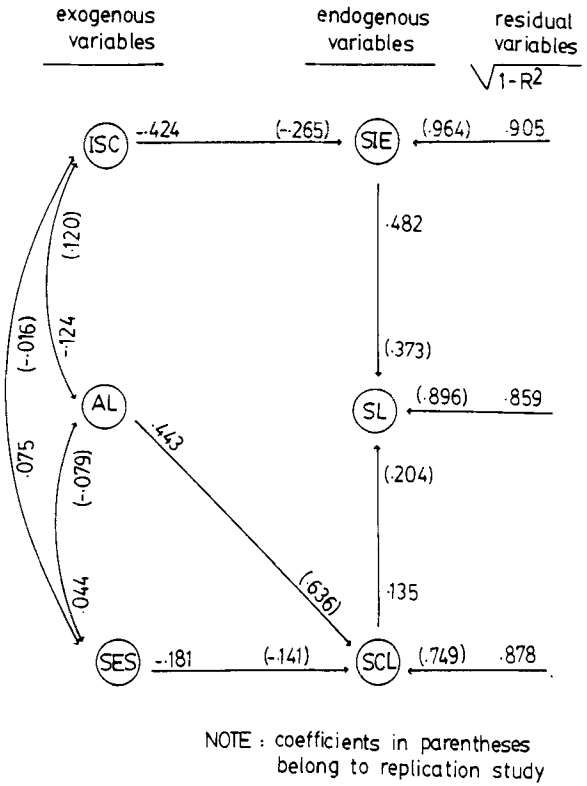

Figure 3: The parsimonious model.

Table 3

Decomposition of Correlations Among the Parsimonious Model Variables of Study I (N = 256)

	Causal Association					+ Noncausal Association	= Total Association	
Variables	[Direct	+ Indirect	= Total]	+	[Σ Components	= Total]	= Predicted	Obtained
SIE/ISC	$p_{SIE/ISC}$ (-.424)	+ ____	=-.424	+	____		= -.424	-.424
SCL/AL	$p_{SCL/AL}$ (.443)	+ ____	= .443	+	$r_{AL/SES}p_{SCL/SES}$ (.044) (-.181)	=-.008	= .435	.434
SCL/SES	$p_{SCL/SES}$ (-.181)	+ ____	=-.181	+	$r_{SES/AL}p_{SCL/AL}$ (.044) (.443)	= .019	= -.162	-.181
SL/SIE	$p_{SL/SIE}$ (.482)	+ ____	= .482	+	$r_{SIE/SCL}p_{SL/SCL}$ (.080) (.135)	= .011	= .493	.460
SIE/AL	____	+ ____	= ____	+	$r_{AL/ISC}p_{SIE/ISC}$ (-.124)(-.424)	= .053	= .053	.057
SIE/SES	____	+ ____	= ____	+	$r_{SES/ISC}p_{SIE/ISC}$ (.075) (-.424)	=-.032	= -.032	-.121
SL/ISC	____	+ ____	= ____	+	$r_{ISC/SIE}p_{AL/SIE}$ (-.424)(.482) + $r_{ISC/SCL}p_{SL/SCL}$ (-.092) (.135)	=-.216	= -.216	-.272
SL/AL	____	+ ____	= ____	+	$r_{AL/SIE}p_{SL/SIE}$ (.057) (.482) + $r_{AL/SCL}p_{SL/SCL}$ (.434) (.135)	= .086	= .086	.166
SL/SES	____	+ ____	= ____	+	$r_{SES/SIE}p_{SL/SIE}$ (-.121) (.482) + $r_{SES/SCL}p_{SL/SCL}$	=-.082	= -.082	-.118
SCL/ISC	____	+ ____	= ____	+	$r_{ISC/AL}p_{SCL/AL}$ (-.124)(.443) + $r_{ICS/SES}p_{SCL/SES}$ (.075) (-.181)	=-.068	= -.068	-.092

Table 4

Decomposition of Correlations Among Parsimonious Model Variables of Replication Study (N = 115)

	Causal Association			+	Noncausal Association			= Total Association	
Variables	[Direct	+ Indirect	= Total]	+	[Σ Components	= Total]	= Predicted		Obtained
SIE/ISC	$P_{SIE/ISC}$ (-.265)	+ ____	= -.265	+	____		= -.265		-.265
SCL/AL	$P_{SCL/AL}$ (.636)	+ ____	= .636	+	$r_{AL/SES}P_{SCL/SES}$ (-.079)(-.141)	= .011	= .647		.647
SCL/SES	$P_{SCL/SES}$ (-.141)	+ ____	= -.141	+	$r_{SES/AL}P_{SCL/AL}$ (-.079)(.636)	=-.050	= -.191		-.191
SL/SIE	$P_{SCL/SES}$ (.373)	+ ____	= .373	+	$r_{SIE/SCL}P_{SL/SCL}$ (.007) (.204)	= .001	= .374		.382
SL/SCL	$P_{SL/SCL}$ (.204)	+ ____	= .204	+	$r_{SCL/SIE}P_{SL/SIE}$ (.007) (.204)	= .003	= .207		.209
SIE/AL	____	+ ____	= ____	+	$r_{AL/ISC}P_{SIE/ISC}$ (.120) (-.265)	=-.032	= -.032		-.095
SL/ISC	____	+ ____	= ____	+	$r_{ISC/SIE}P_{SL/SIE}$ (-.265)(.373) + $r_{ISC/SCL}P_{SL/SCL}$ (.146) (.204)	=-.069	= -.069		-.088
SL/AL	____	+ ____	= ____	+	$r_{AL/SIE}P_{SL/SIE}$ (-.095)(.373) + $r_{AL/SCL}P_{SL/SCL}$ (.647) (.204)	= .097	= .097		.047
SL/SES	____	+ ____	= ____	+	$r_{SES/SIE}P_{SL/SIE}$ (-.020) + $r_{SES/SCL}P_{SL/SCL}$ (-.191) (.204)	=-.046	= -.046		.017
SCL/ISC	____	+ ____	= ____	+	$r_{ISC/AL}P_{SCL/AL}$ (.120) (.636) + $r_{ISC/SES}P_{SCL/SES}$ (-.016) (-.141)	= .079	= .079		.146

well. SL was found to be "caused" *essentially* by SIE ($r = .482$, $p < .01$ for study I and $r = .373$, $p < .01$ for replication study) and SCL ($r = .135$, $p < .10$ for study I and $r = .204$, $p < .05$ for replication study) together accounting for 26.1% (and 19.6% for replication study) of the total variance. SIE was found to be "causally influenced" by ISC ($r = -.424$, $p < .01$ for study I and $r = -.265$, $p < .01$ for replication study) accounting for 18% (and 7% for replication study) of the total variance in SIE scores. Also, SCL was found to be "causally" determined by AL ($r = .443$, $p < .01$ for study I and $r = .636$, $p < .01$ for replication study) SES ($r = -.181$, $p < .05$ for study I and $r = -.141$, $p < .10$ for replication study) together accounting for 22.9% (and 43.9% for replication study) of the total variance.

DISCUSSION AND CONCLUSIONS

This study demonstrated store loyalty is determined by a set of highly *interrelated* variables. The interrelationship among store loyalty determinants has been examined conceptually and empirically. A "causal" model was formulated to describe the interrelationships among the factors which determine store loyalty. This model puts forth the notion that store loyalty is influenced by store-image evaluation and shopping-complex loyalty. Store-image evaluation, in turn, is influenced by self-image/store-image congruity. Also, shopping-complex loyalty is influenced by area loyalty and socioeconomic status.

This model was subjected to testing through a path analytic procedure in two independent studies. The results of both studies provided validational support for the "causal" model as developed in this paper. Although the interrelationships among store loyalty determinants were delineated in this model, the results showed the task of identifying the major determinants of store loyalty are far from complete, as indicated by the magnitude values of the residual variables. Further conceptualizations and testing of store loyalty determinants are yet to be fully identified and validated.

Research Implications

Although the path analytic findings of the proposed store loyalty model are strong, further study is needed to resolve some troublesome issues. Among these are:

1. It is not clear whether self-image/store-image congruity causally affected store-image evaluations. It is plausible to suggest that store-image evaluations may have influenced the congruity process. For

example, a shopper may be familiar only with the store range of product prices. Based on this functional store-image attribute, he/she may infer the stereotypic or symbolic image associated with the store, and not vice versa. These two competing hypotheses should be tested at a future date.

2. It is also not clear whether *either* or *both* self-image/store-image congruity and functional store-image evaluations have causally determined store loyalty. According to Bem's (1967) self-perception theory, it is very conceivable both symbolic and functional store-images may have been determined by attributing the causes of one's shopping behavior to those symbolic and/or functional store-image. These causal attributions may have accounted for subjects' responses to the store loyalty measures. Future research might also address this issue.
3. The use of the semantic differential technique to measure self-concept, symbolic and functional store-image is plagued with problems. First, equal weights were assumed for all attributes. Second, salience of attributes might not be high across respondents and across stores. Finally, responses might have been affected by halo effects (Sirgy 1982). Other type measures should be used in future research.
4. Based on the percentage of predicted variance in store loyalty scores, it is obvious that other unforseen factors should be included in the model. These factors may include loyalty to specific product brands which a store might not carry (*brand loyalty*), the length of time the store has been in the market (*store life-cycle*), etc. Future research may incorporate these variables into the proposed store loyalty model.

Managerial Implications

The managerial implications of this study are clearcut;

1. It is important for the retail manager to know how the consumers perceive the functional, as well as the symbolic, characteristics of his or her store. This knowledge can be obtained through store-image research.
2. Those functional store-image characteristics found to be poorly evaluated by the majority of the respondents should be the basis for retail strategy development. These strategies should be developed to influence consumers' image of the store, and therefore increase store patronage and store loyalty.

3. It is also essential for the retail manager to realize that those symbolic images of the store (to which most retailers hardly pay any attention) play a significant role in store patronage and loyalty behaviors. The retailer is therefore advised to also gather information about how consumers see his or her store in *personality* terms. Is the store a friendly store? A formal store? A classy store? The retailer should also know something about how consumers see themselves. If the personality of the store seems to coincide with the personality of most of the target customers, then the retailer can rest assured that he or she has won half the battle. If the retailer finds out that most of his or her target customers have discrepant personality images from those propagated by his or her store, then it is time for action. Through various promotional efforts, the retailer should be able to change those symbolic store-images in the direction of his or her target customers. This is essential since self-image/store-image congruity effects, as demonstrated by this study, do influence how customers perceive the functional store attributes.
4. It is not enough for the retail manager to watch out for his/her store without paying any regard to what is happening with the immediate, surrounding stores. Based on this study, shopping-complex loyalty is a significant determinant of store loyalty. If customers are not pleased with the surrounding stores for one reason or another, their loyalty to his or her store will decline. It is essential for the retail manager to see that the neighboring stores are using wise and sound strategies to maintain a satisfactory level of store patronage and loyalty. This undoubtedly entails cooperating and establishing harmonious relations with the neighboring retail managers. In doing so, the retail managers in the immediate surrounding areas must develop promotional strategies to enhance shopping-complex loyalties. This can be accomplished by considering area loyalty and socioeconomic status to be two significant factors in affecting shopping-complex loyalty. To increase shopping-complex loyalty, the retail managers should appeal to those customers who are basically loyal to the general area where the shopping complex is geographically located, and to those customers whose socioeconomic status matches the pricing policies and social class image portrayed by these unified entity of stores.

FOOTNOTES

[1]Social congruity is defined as the match between symbolic (i.e., personality related — "friendly," "unfriendly," "formal", etc.) store-image and shoppers' social self-image ("the image of myself as seen by others"). Ideal social congruity is defined as the match between symbolic store-image and shopper's ideal social self-image ("the image of myself as I would like to be seen by otherss").

[2]Evaluation of store-image was construed to be an attitude towards the store as determined by the perception and evaluation of the store's functional attributes (i.e., store's product variety, store's prices, store's location).

[3]Area loyalty and shopping-complex loyalty are defined as behavioral tendencies to shop in a particular shopping mall or a small surrounding mall where most of the stores are conglomerated (shopping-complex loyalty). These two constructs, to the best of our knowledge, are new to the retailing literature.

[4]Of course, the same theory can be used to argue that store loyalty is determined by other factors (maybe sheer habit) and what is really occurring here in the model depicted in Figure 1 is a store loyalty *attribution* process.

[5]However, Fornell and Larcker (1981) argued that the chi-square test may provide misleading results and therefore offered the F-test to be applied on each endogeneous variable.

$Fq,(N-q-1)\ [R^2\ (N-q-1)]/[(1 - R^2)q]$

where q = number of observed independent variables, and R^2 = percentage of variance accounted for in a specific endogeneous variable. Following these suggestions, three F-tests were conducted for each of the SIE, SL, and SCL variables: The results were as follows:

Study I	Replication Study
SIE -- F(1,255) = 55.970**	SIE -- F(1,114) = 8.581*
SL -- F(2,253) = 36.052**	SL -- F(2,112) = 88.815*
SCL -- F(2,253) = 38.018**	SCL -- F(2,112) = 43.822**

*p < .01 **p < .001

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