Non-verbal Customer-to-Customer Interaction in Retail Setting: An Investigation of Indirect Effects of Perceived Customer Similarity on Important Marketing Outcomes

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Non-verbal Customer-to-Customer Interaction in Retail Setting: An Investigation of Indirect Effects of Perceived Customer Similarity on Important Marketing Outcomes

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Abstract - The purpose of this paper is to empirically examine the causal effects of similarity among customers in retail mall settings on four outcome variables: intent to stay, satisfaction, word-of-mouth generation and repurchase intention. Using structural equation modeling, we tested both direct and mediated effects. Results indicate significant direct influence in the direct model and significant indirect influence in the mediated model. The study suggests that similarity with other customers has a significant influence on outcome variables. Therefore, mall managers should measure and monitor consumers’ perceptions of similarity and enhance these similarities whenever appropriate and feasible. To our knowledge, this is the first paper to test a causal model in order to understand the effects of mere presence of other customers’ retail setting. However, care should be taken when generalizing from student data.

Keywords - Customer-to-customer, Similarity, Retail, Indirect effects

Relevance to Marketing Educators, Researchers and/or Practitioners - Simplicity between customers can impact some very important marketing outcomes such as word of mouth and time spent in retail settings which in turn have the ability to influence market shares and profits. Understanding the paths through which similarity impacts the marketing outcomes can help retailers, educators and researchers to develop strategies that take advantage of customer similarities and subsequent positive interactions.
Introduction

Except for online purchases, most shopping experiences are delivered in the presence of other customers. The presence of other customers in a retail space has generally been treated as an uncontrollable external factor; worthy of mention but easy to ignore in the planning process. As a consequence, the subject has attracted scant research, as academicians and managers are more likely to focus on controllable elements of the marketing mix such as product, price, store design and layout rather than on the presumed uncontrollable effects of co-shoppers. Clearly, a shopping experience can be ruined (or enhanced) through no fault of a retailer but simply because of the presence of other incompatible (or compatible) customers. The role of other customers becomes critical in situations where customers are in close physical proximity and are expected to share time and space (Martin & Pranter, 1989). The recent emphasis on delivering superior shopping experiences calls for marketers to take into account the strong negative or positive impact that co-shoppers may have on such experiences.

Most of the previous research in customer-to-customer interactions has focused on the study of social interactions, including verbal interactions in the presence of other customers. This includes documenting and organizing a typology of undesirable behaviors of fellow customers; identifying the roles that customers assume in the presence of other customers; and to the related issue of crowding. Researchers, with some exceptions, have not studied the impact of non-interactive social situations on managerially relevant outcomes such as customer satisfaction with the retail experience and consequent word-of-mouth generation. We define non-interactive social situations as events (shopping mall visits) where a social entity (other customers) is physically present during one’s shopping but is neither involved in nor attempts to overtly in any way with the customer. In accordance with the extensive evidence for homophily (i.e., "love of the same") in social networks (McPherson, Smith-Lovin & Cook, 2001), customers may become comfortable in the presence of similar co-shoppers and may enjoy their presence; or conversely, become uncomfortable and want to leave when mixed with dissimilar co-shoppers. Customers will visually gauge the level of similarity with other customers by observing some subtle and not-so-subtle cues such as apparel, poise, assurance or ethnicity, race, gender and age, (McPherson, Smith-Lovin & Cook, 2001). It is assumed that this visually inferred similarity is interpreted as similarity in status, tastes and values (Lazarsfeld & Merton 1954). The perceived similarity with co-shoppers may increase satisfaction with the shopping experience and many other consequent variables of interest such as positive word-of-mouth generation, repurchase intention, and intention to stay in the mall. Perceived dissimilarity would have the opposite and negative effects on the outcome variables.

The study of the impact on shoppers of the presence of co-shoppers has largely been ignored. We fill this gap in the literature by focusing on the impact of the mere presence of other customers during shopping experiences on four outcome variables: intention to stay in the mall, satisfaction with the mall, word-of-mouth generation,
and repurchase intention. Since all four variables drive importance, they are important to retail managers.

In addition, with the exception of Argo, Dahl and Manchanda (2005) who have adopted Latane’s theory of social impact, much of the previous research lacks a theoretical foundation. Therefore, we start by reviewing the theories that support the assumption that the mere presence of other customers in a shopping mall will affect customer behaviors and marketing outcomes: theories of social impact, social comparison, social identity, social distance, and self-congruity. Second, we elaborate a more complex theoretical frame by including the mediating variables of the established pleasure-arousal framework from environmental psychology. Argo, Dahl and Manchanda (2005) suggest that the impact of other customers on marketing outcomes is better explained when mediated by pleasure and arousal. This framework has already been used to study the effect of store atmosphere in retail settings (Donovan & Rossiter 1982). Third, we review the managerially significant customer behaviors and marketing outcomes: word-of-mouth generation, customer satisfaction and repurchase intentions. Methodology, analysis of results, conclusions, limitations and managerial implications and suggestions for further research follow.

THEORETICAL FOUNDATIONS AND HYPOTHESES

Theories Supporting the Importance of the Role of Other Customers: The Direct Causal Model

Several psychological and social theories can explain the impact of the mere presence of other customers on one’s shopping experience.

Theory of Social Impact

“As social animals we are drawn by the attractiveness of others and aroused by their mere presence” (Latane 1981, p.343). People (shoppers) are known to be influenced by the real, implied or imagined presence of other people. Latane believes that the amount of influence experienced by the target (a shopper) is a multiplicative function of strength, immediacy and the number of people present in the social environment (shopping mall). In this paper we focus on the strength of social influence.

Latane defines social strength as “salience, power, importance, or intensity of the given source to target – usually this would be determined by such things as the source’s status, age, socio-economic status, and prior relationship with, or future power over, the target” (Latane 1981, p.344). Argo, Dahl, and Manchanda (2005), operationalize social source strength as “perceived similarity” where greater similarity among customers means greater influence. In shopping malls, co-shoppers are the social source and the shopper is the target. The more the target perceives similarity between himself or herself and the source, the more the target will be influenced in his or her behavior, such as intention to stay in the mall.
**Theory of Social Comparison**

According to the theory of social comparison, that individuals often assess how well they are doing by comparing themselves with similar others. When Festinger (1954) developed the theory, he argued that individuals desire an accurate assessment of their performance, and that in the absence of objective standards they often look to others, preferably those who are similar to them in the assessment type. For example, if one desires to assess his or her athletic ability, the comparison individual is likely to be a fellow member of sports team and not someone who excels in academics.

The tendency to compare self with others decreases as the perceived difference between one’s opinions and performance and those of others increases. In other words, someone who shares one’s opinions and is similar in performance will be chosen for comparison. A person will be less attracted to situations where others do not share his or her opinions and where they perform differently. In such situations the person will stop making these comparisons. The cessation of comparison is expected to be accompanied by hostility or derogation towards others because continued comparison implies unpleasant consequences for the comparer.

In retail stores, customers will find themselves in company of some who are similar to them and some who are not (Martin 1996; Martin & Pranter, 1989). Shoppers tend to observe the actions and to feel comfortable around others whom they judge to be like themselves. This perceived similarity is evaluated visually, using visible traits such as ethnicity, age and gender and subtle cues such as apparel, poise, and assurance. Shoppers attribute and frequently stereotype tastes to physical features and tend to trust and gravitate toward strangers who are similar to those with whom they are already socially connected (McPherson, Smith-Lovin & Cook, 2000).

**Social Identity Theory**

Social identity theory suggests that people are motivated to behave in ways that maintain and boost their self-esteem. Social comparison, a basic idea in this theory, with other customers in the mall can increase or decrease one's self-esteem.

A positive self-concept is part of normal psychological functioning. There is evidence that if we are to deal effectively with the world we need to feel good about ourselves. The idea of social comparison is that in order to improve our self-esteem we tend to evaluate ourselves in comparison to similar others.

Without high self-esteem a person feels isolated and this isolation causes anxiety. A visit to a shopping mall patronized by similar customers can work to increase self-esteem for a person by association and affiliation. Such association has the potential for contributing positively to their identity, and therefore strengthening their own self-esteem.

**Theory of Social Distance**

The impact of other customers in retail environments can also be explained by the theory of social distance. Customers from the same social class are expected to react
spontaneously to each other more than with those from higher or lower social classes (Cooley, 1909). Research shows that people prefer to interact with people in their own social class. They are less willing to interact with people of higher social classes, and would rather avoid associating with people in lower social classes (Bogardus, 1925; Westie, 1959; Laumann, 1965; Laumann & Senter, 1975).

**Self-Congruity Theory**

Self-congruity theory suggests that part of consumer behavior may be explained in terms of comparison between self-image and the image of a brand, store or a mall (Sirgy, 1986; Sirgy et al., 1997). Consumers often have a preference for and choose brands, including shopping malls that display high levels of perceived congruity with themselves. In seeking self-congruency, customers are either trying to preserve self-concept via self-consistency motivation or to enhance self-concept via self-esteem motivation (Hong & Zinkhan, 1995). It is clear that the type and quality of other customers in the mall affects the level of self-congruency with the mall. Identification with other customers is an important aspect of service encounter, as the behavior of other customers can impact overall quality evaluations and resultant satisfaction (Bitner et al., 1997; Parker & Ward, 2000; Swinyard 1993). In this research, we study the impact of the similarity with other customers on self-congruity with the image of the mall.

The concept of shopping mall image has been based on a mix of tangibles such as price, layout, ease of reaching, parking, hours of operation, merchandise, quality and psychological dimensions such as satisfaction, value, reputation, services, atmosphere (Downs, 1970; Finn & Louviere, 1996; Hauser & Koppelman, 1979). Mall atmosphere is defined by a multiplicity of factors such as design, layout, employee behavior, reputation and other customers. Using the construct of self-congruency, Chebat, Sirgy and St-James (2005) demonstrated that self-congruency experience impacts mall image.

These theories point to the potentially strong impact of the mere presence of fellow customers in retail settings. They suggest that perceived similarity between self and co-shoppers is a key determinant of positive impact on self and the quality of the shopping experience. In the direct causal model, we hypothesize that perceived similarity between self and co-shoppers will be positively related to (1) intention to stay at the mall, (2) satisfaction with the mall, (3) generation of positive word-of-mouth about the mall, (4) repurchase intention, and (5) self-congruity with mall image.

**A More Complex Mediated Model**

These hypotheses rest on a simple direct causal model. Since consumer behavior in retail space is a fairly complex phenomenon involving marketing inputs, emotion and behaviors, such simple models may offer little diagnosis value to guide managerial action. A more powerful way of studying the impact of marketing stimulus on behaviors such as word-of-mouth and other outcome variables is to
include mediating variables. These mediating variables will help establish not only the causality but also the paths of causality.

Additionally, the empirical methodologies used to test complex causal relationships affect the validity of the results. Ethnography and/or critical incidence technique (Arnould & Price, 1993; Grove & Fisk, 1997; Harris et al., 1997) have been most used. While others have used multiple regression to understand these issues (Moore, Moore & Capella, 2005; Wu, 2007), no study has tested these relationships within an SEM framework, which is the appropriate method to study interactions among multiple-item constructs. In order to produce more valid results, we adopt the SEM framework.

The Pleasure-Arousal Framework

The Mehrabian-Russel environmental psychology model argues that all responses to an environment can be classified as either approach or avoidance. What it means is that customers will either show an interest or a lack of interest in exploring the mall; to interact with others or avoid them; to enjoy staying in the mall or to leave. The original Mehrabian Russel model identifies three emotional states – pleasure-displeasure, arousal-nonarousal, and dominance-submissiveness--as moderating a person’s response to the environment. The model was later modified by Russell and Pratt (1980) who removed dominance-submissiveness but kept the other two states. They believe that interpretation of dominance requires a cognitive input and cannot qualify as purely emotional; pleasure and arousal sufficiently represent a person’s response to the environment. Pleasure and arousal, although orthogonal, show a conditional interaction (i.e. high arousal in pleasing environment will enhance an approach while high arousal in an unpleasing environment results in greater avoidance). Arousal in a shopping environment is directly related to the amount of information in the environment. Higher information load indicators such as crowding, surprises, or novel situations will make a customer feel excited, stimulated and alert while a low information load is expected to make a customer relaxed and calm.

Based on the Stimulus-Organism-Response (S-O-R) paradigm we relate one feature of the environment--the presence of co-shoppers (S)--to approach-avoidance retail behaviors (R). This relationship is mediated by an individual’s emotional state (O) as aroused by the presence of other customers. This model has been used extensively to study marketing-related issues (Baker, Levy, & Grewal 1992; Donovan & Rossiter 1982; Donovan et al. 1994; Dube, Chebat & Morin 1995; Kaltcheva & Weitz 2006; Sherman, Mathur & Smith 1997; Sweeney & Wyber 2002; Wirtz & Bateson 1999; Yalch & Spangenberg 2000).

Specifically, the mediated model hypothesizes that:

(1) perceived similarity with other customers will have a mediated effect on intention to stay in the mall through pleasure and arousal;
(2) perceived similarity with other customers will have a mediated effect on satisfaction with the mall through pleasure and intention to stay;
(3) the effect of perceived similarity with other customers on self-congruity with the shopping mall image will be mediated by pleasure;
(4) Relationship between perceived similarity with other customers and overall satisfaction is mediated by pleasure, arousal and intention to stay;
(5) that perceived similarity with other customers will have indirect impact on word-of-mouth generation; and
(6) that perceived similarity with other customers will have indirect impact on repurchase intention for the mall

Managerially Important Outcome Variables in Retail Settings

Word-of-mouth
The success and growth of a business, and especially of a service business, depends on its ability to generate positive word-of-mouth (Mangold, Miller & Brockway, 1999). Service attributes are difficult to evaluate a priori. For services such as retail shopping, positive word-of-mouth is a major criterion for a decision to visit or not to visit a shopping mall. Conversely, the consequences of negative word-of-mouth can be extremely damaging.


Raajpoot, Sharma and Chebat (2009) have shown that similarity with other customers in retail environment is also a good predictor or word-of-mouth generation. They tested a model in which similarity with other customers contributed to word-of-mouth generation while this relationship is being moderated by the hedonic nature of the shopping experience and overall retail evaluation. While this model used similarity with other customers as one of the three factors (the others being ambiance and employee behavior), we extend their research by exploring the sole impact of similarity with other customers on word-of-mouth.

Satisfaction and Repurchase Linkage
Satisfaction is the degree of pleasure or contentment felt after an overall evaluation of a product/service consumption experience (Hellier et al. 2003; Oliver, 1992). The majority of research on repurchase intentions has described satisfaction as a reliable indicator of future purchase intentions (Anderson & Sullivan, 1990; Bitner,
1990; Cronin & Taylor; 1992; Fornell, 1992; Oliver, 1980; Rust & Zahorik, 1993; Woodside, Fray & Daly, 1989). It must be noted, however, that satisfaction is only one of many factors in repurchase intention. Even the relationship between satisfaction and repurchase intention is not strictly a direct one. Many other factors such as personal characteristics, length of patronage and loyalty are expected to moderate this relationship (Homburg & Giering 2001; Mittal & Katrichis 2000; Rust & Zahorik 1993; Sharma & Patterson, 2000).

Method

Data Collection
Data were collected from students enrolled in undergraduate marketing research classes. Students responded to an online questionnaire as part of a class exercise. Respondents were asked to recall a shopping mall visit in the previous week and respond to a series of Likert scales 1-7. Data were collected over a three-week period and respondents reported an average of 30 minutes to complete the survey.

Two hundred and forty-six responses were collected, of which 227 were usable. The sample was slightly skewed towards male (55.9%) which reflects the general campus population. The majority (69%) were 18-24 years old with (87%) being single. Sixty percent visited the mall with a friend; 30% went alone. Sixty-seven percent had a list of things to buy and (utilitarian purchasers); 20% went with no purpose in mind.

Measures

Perceived similarity with other customers
A modified measure of self-image congruence (Sirgy et al. 1997) was adopted. It consisted of 6 items (1 reverse worded) with an $\alpha$ value of 0.94. In exploratory factor analysis, the single factor accounted for 72.2% of the variation.

Pleasure
Modified four items (Happy, contented, satisfied, pleased) Mehrabian and Russell (1974) scale was adopted ($\alpha = 0.903$). In exploratory factor analysis, the single factor accounted for 77.7% of the variation.

Arousal
Modified four items (aroused, stimulated, frenzied, jittery) Mehrabian and Russell (1974) scale was adopted ($\alpha = 0.668$). In exploratory factor analysis, the single factor accounted for 62.05 of the variation.

Intention to stay
A three-item measure ($\alpha=0.895$)

Repurchase Intention
A three-item measure from Hellier et al. 2003 was used ($\alpha=0.898$). In exploratory factor analysis, the single factor accounted for 83.21% of the variation.
Word-of-mouth
Modified three-item measure from Raajpoot, Sharma and Chebat (2009) was adopted ($\alpha = 0.866$). In exploratory factor analysis, the single factor accounted for 79.14% of the variation.

Customer Satisfaction
Satisfaction measure used by The American Customer Satisfaction Index (ACSI) was adopted ($\alpha = 0.851$). In exploratory factor analysis, the single factor accounted for 77.57% of the variation.

Self-congruity with shopping mall
Modified three-item measure was adopted from Sirgy et al. (1997) ($\alpha =0.855$). In exploratory factor analysis, the single factor accounted for 74.5% of the variation.

ANALYSIS AND RESULTS

We take a two-step approach to analyze the data. First we estimate a direct model (as shown in Fig. 1) in which perceived similarity with other customers load directly on four outcome variables. If the data fit this model well, we will test a more complex mediated model as shown in Fig. 2. This model is mediated by emotions generated by similarity or lack thereof with other customers. In this way can come to a more complex understanding of both the direct and indirect effects of similarity with other customers.
Figure...1

Direct Model

Figure...2

Mediated Model
Direct Causal Model Results

Table 1 shows fit indices. A $\chi^2$ value of 312 with 115 degrees of freedom was significant (p < 0.001). Results show that the data fits the model reasonably well (GFI= 0.938, AGFI=0.911, CFI=0.984, RMSEA =0.060). Table 2 presents the standardized regression weights for the paths defined in the model. All four paths were statistically significant (p < .000), supporting the first five hypotheses of the direct model. Similarity with other customers loaded most on intention to stay in the mall (0.64) and least on overall satisfaction (0.39). A higher loading on intention to stay can be explained in terms of its being the most immediate behavioral reaction to similarity that can lead to secondary behaviors such as satisfaction. A good fit of direct model will lead us to test a more complex model with the mediating variables.

Table...1

**Direct Model Fit Assessment**

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Suggested</th>
<th>Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square significance</td>
<td>p &gt;= 0.05</td>
<td>0.001</td>
</tr>
<tr>
<td>Chi-square / degrees of freedom (Wheaton et al., 1977)</td>
<td>&gt;= 5.00</td>
<td>2.710</td>
</tr>
<tr>
<td>Goodness of fit index (Joreskog and Sorbom, 1988)</td>
<td>&gt;= 0.90</td>
<td>0.938</td>
</tr>
<tr>
<td>Adjusted goodness of fit index (Joreskog and Sorbom, 1988)</td>
<td>&gt;=0.80</td>
<td>0.911</td>
</tr>
<tr>
<td>CFI (Bentler 1990)</td>
<td>&gt;= 0.90</td>
<td>0.984</td>
</tr>
<tr>
<td>RMSEA (Hu and Bentler, 1995)</td>
<td>&gt;= 0.050</td>
<td>0.060</td>
</tr>
</tbody>
</table>

Table...2

**Standardized Regression Weights...Direct Model**

<table>
<thead>
<tr>
<th>Perceived similarity with other Customers</th>
<th>Intention to stay</th>
<th>Estimate</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived similarity with other Customers</td>
<td>Satisfaction with shopping mall</td>
<td>.39</td>
<td>.000</td>
</tr>
<tr>
<td>Perceived similarity with other Customers</td>
<td>Word of mouth</td>
<td>.51</td>
<td>.000</td>
</tr>
<tr>
<td>Perceived similarity with other Customers</td>
<td>Repurchase Intention</td>
<td>.40</td>
<td>.000</td>
</tr>
</tbody>
</table>
Mediated Causal Model Results

A hypothesized mediated model as shown in Fig.1 was tested using maximum likelihood estimation procedure within SEM framework. Table 3 provides model fit statistics. A $\chi^2$ value of 655 with 312 degrees of freedom was significant ($p < 0.001$). High goodness-of-fit statistics (GFI= 0.914, AGFI=0.891, and CFI=0.954) and a reasonably low RMSEA (0.063) provide evidence of a good fit between data and the hypothesized mediated model. Table 4 presents standardized path estimates for the proposed structural model. All paths in the model were statistically significant and in the expected directions supporting the mediated hypotheses. Paths from arousal showed negative loadings. An aroused customer will have negative intentions to stay (-0.231, $p<.002$) and tend to exit mall as soon as possible. Similarly aroused customers will have negative repurchase intentions (-0.241, $p<.005$).

Table...3
Mediated Model Fit Assessment

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Suggested</th>
<th>Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chi-square significance</td>
<td>$p &gt;= 0.05$</td>
<td>0.001</td>
</tr>
<tr>
<td>Chi-square / degrees of freedom (Wheaton et al., 1977)</td>
<td>$&gt;= 5.00$</td>
<td>2.100</td>
</tr>
<tr>
<td>Goodness of fit index (Joreskog and Sorbom, 1988)</td>
<td>$&gt;= 0.90$</td>
<td>0.914</td>
</tr>
<tr>
<td>Adjusted goodness of fit index (Joreskog and Sorbom, 1988)</td>
<td>$&gt;=0.80$</td>
<td>0.891</td>
</tr>
<tr>
<td>CFI (Bentler 1990)</td>
<td>$&gt;= 0.90$</td>
<td>0.954</td>
</tr>
<tr>
<td>RMSEA (Hu and Bentler, 1995)</td>
<td>$&gt;= 0.050$</td>
<td>0.063</td>
</tr>
</tbody>
</table>
### Table 4

**Standardized Regression Weights...Mediated Model**

<table>
<thead>
<tr>
<th>Perceived similarity with other Customers</th>
<th>Pleasure</th>
<th>Estimate</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>→</td>
<td>.420</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Perceived similarity with other Customers</th>
<th>Arousal</th>
<th>Estimate</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>→</td>
<td>-.405</td>
<td>.000</td>
<td></td>
</tr>
</tbody>
</table>

| Pleasure | Intention to stay | .408 | .000 |
| Arousal  | Intention to stay | -.231 | .002 |
| Pleasure | Satisfaction with shopping mall | .484 | .000 |
| Intention to stay | Satisfaction with shopping mall | .274 | .000 |
| Perceived similarity with other Customers | Self-congruity with shopping Mall | .528 | .000 |
| Pleasure | Self-congruity with shopping Mall | .334 | .000 |
| Arousal  | Repurchase Intention | -.241 | .005 |
| Satisfaction with shopping mall | Repurchase Intention | .378 | .000 |
| Self-congruity with shopping Mall | Word of mouth | .447 | .000 |
| Repurchase Intention | Word of mouth | .428 | .000 |
| Satisfaction with shopping mall | Word of mouth | .185 | .006 |

The model proposed two important three-way mediated relationships. The first one is the mediating role of pleasure in the relationship between similarity and self-congruity with mall image. This mediation can be confirmed by obtaining p values with bootstrap procedure (.08, p<.001....see table 5). This p value can be obtained by constructing two-sided bias-corrected confidence intervals. The results show that the perceived similarity with other customers has a significant indirect impact on self-congruity with mall image. The second one is the mediation of intention to stay...
on relationship between pleasure and satisfaction. An indirect effect of .13, p<.001 within bootstrap procedure confirms the mediation.

Table...5
Standardized Total Indirect Effects...Mediated Model

<table>
<thead>
<tr>
<th></th>
<th>Perceived Similarity with Other Customers</th>
<th>Arousal</th>
<th>Pleasure</th>
<th>Intention to Stay</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOM</td>
<td>0.38 (.001)</td>
<td>-0.02 (.078)</td>
<td>0.37 (.001)</td>
<td>0.15 (.004)</td>
</tr>
<tr>
<td>Satisfaction with mall</td>
<td>0.23 (.003)</td>
<td>-0.05 (.101)</td>
<td>0.13 (.001)</td>
<td>N.A.</td>
</tr>
<tr>
<td>Intention to Stay</td>
<td>0.18 (.003)</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
<tr>
<td>Repurchase Intention</td>
<td>0.16 (.003)</td>
<td>-0.02 (.077)</td>
<td>0.29 (.002)</td>
<td>0.15 (.004)</td>
</tr>
<tr>
<td>Congruity with Mall Image</td>
<td>0.08 (.001)</td>
<td>N.A.</td>
<td>N.A.</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

Apart from these two mediations, whose significance can be tested, there are other indirect mediated effects whose significance cannot be tested in the extended model but need to be analyzed. We discuss these results below.

**Similarity with other customers and word-of-mouth**

In analyzing the effect of similarity on word-of-mouth generation we looked both at direct and indirect path loadings and their significance. Results are presented in Table..6. The direct path from similarity to word-of-mouth, within the mediated model, had close to zero loading (0.06 p=0.621) and is insignificant. The total indirect direct effects from similarity to word-of-mouth (Table...5) on the other hand had a significant loading of 0.38 (p=.003). Significance or p-value of indirect effects was obtained through bootstrap method by constructing two-sided bias-corrected confidence intervals. This total indirect effect passes through four constructs (pleasure, intention to stay, overall satisfaction and self-congruity with mall). We may conclude that similarity has an indirect effect on word-of-mouth generation but we cannot determine the amount of mediation each of these constructs contributes to the overall indirect effects. An alternate approach may be to break down this model into simple one-way mediation paths (i.e. similarity→pleasure→word-of-mouth; similarity→satisfaction→word-of-mouth; similarity→intention to stay→word-of-mouth). In order to establish mediation in this simple three-way relationship within SEM framework, we followed Holmbeck's (1997) recommendations. In order to establish mediation in the three-way relationship among constructs A, B and C, where B is a mediator, we need to satisfy the following conditions: 1) assess fits for paths A—C, A—B, and B---C in that order. If all three paths are significant then test model fits for model a) when path A—C is
unconstrained  b) when path A--C is constrained to zero. If the $\chi^2$ difference between unconstrained and constrained models is substantial, then mediation is considered significant. Our results show that of the four possible mediators (i.e. pleasure, congruity with mall image, intention to stay and satisfaction) only two mediated strongly i.e. pleasure ($\Delta \chi^2 = 22.21$) and overall satisfaction with the mall ($\Delta \chi^2 = 17.49$) while the other two seem not to mediate with low $\chi^2$ difference i.e. congruity with mall image ($\Delta \chi^2 = 2.29$) and intention to stay ($\Delta \chi^2 = 2.40$).

**Similarity with other customers and intention to stay in the mall**

In the direct (unmediated) model, similarity had a strong and significant loading (0.64, p<.000) that disappears in the mediated model. Total standardized indirect effects of similarity on intention to stay calculated through bootstrapping were significant (0.18 p<.003). On further investigation, both possible indirect paths through pleasure ($\Delta \chi^2 =46.5$) and arousal ($\Delta \chi^2 =55.96$) were found to be significant. Arousal, however, seems to exert a slightly greater influence on intention to stay than pleasure does.

**Table...6**

**Summary Results of Three-way Mediated Models**

<table>
<thead>
<tr>
<th>Mediated Paths</th>
<th>$\Delta \chi^2$</th>
<th>$\Delta$ DF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Similarity with other customers $\rightarrow$ Pleasure $\rightarrow$ Word of mouth</td>
<td>22.21</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Congruity with mall image $\rightarrow$ Word of mouth</td>
<td>2.29</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Intention to stay $\rightarrow$ Word of mouth</td>
<td>2.40</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Satisfaction with Mall visit $\rightarrow$ Word of mouth</td>
<td>17.49</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Pleasure $\rightarrow$ Intention to stay</td>
<td>46.57</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Arousal $\rightarrow$ Intention to stay</td>
<td>55.96</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Pleasure $\rightarrow$ Satisfaction with Mall visit</td>
<td>5.42</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Intention to stay $\rightarrow$ Satisfaction with Mall visit</td>
<td>0.72</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Pleasure $\rightarrow$ Repurchase intention</td>
<td>8.08</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Intention to stay $\rightarrow$ Repurchase intention</td>
<td>0.87</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Satisfaction with Mall visit $\rightarrow$ Repurchase intention</td>
<td>5.27</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Arousal $\rightarrow$ Repurchase intention</td>
<td>8.31</td>
<td>1</td>
</tr>
<tr>
<td>Similarity with other customers $\rightarrow$ Pleasure $\rightarrow$ Congruity with mall image</td>
<td>79.89</td>
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</table>
**Similarity with other customers and satisfaction with the mall**
In the direct (unmediated) model similarity had significant standardized loading (0.39, p<.000) that turns out to be insignificant in the mediated model. Total standardized indirect effects of similarity on satisfaction with the mall calculated through bootstrapping were significant (0.23 p<.003). Further investigation revealed that this mediation was solely through pleasure ($\Delta \chi^2 =5.42$) and intention to stay ($\Delta \chi^2 =0.74$) did not mediate the relationship.

**Similarity with other customers and repurchase intention**
In the direct (unmediated) model similarity had a significant standardized loading (0.40, p<.000) that becomes insignificant in the mediated model. Total standardized indirect effects of similarity on satisfaction with the mall calculated through bootstrapping were significant (0.16, p<.003). Further investigation revealed that both pleasure ($\Delta \chi^2 =8.08$) and arousal ($\Delta \chi^2 =8.31$) mediated the relationship between similarity and repurchase intention while intention to stay ($\Delta \chi^2 =0.87$) did not mediate the relationship.

**Conclusions**
We sought to understand the impact of the mere presence of fellow customers on several consumer behaviors in retail setting that play a key role in mall business performance. Our findings are as follows. First, we established the direct causal relationship between similarity and word-of-mouth generation, intention to stay in the mall, satisfaction with mall visit and repurchase intentions and self-congruity with mall. In each case we found significant direct loadings supporting the hypotheses of the direct causal model. The theoretical frameworks we used converge on (dis)similarity with fellow customers as one of many factors that affect shopping experience evaluations. In fact, the presence of fellow customers has been conceived as one of many components of the servicescape that influence consumer evaluations. However, to date, no causal relationship between customer similarity and marketing outcome measures have been proposed and tested.

Second, in order to understand how this process works, we used the pleasure-arousal framework to include emotions in the model in which several complex relationships were proposed. In this model, pleasure and arousal were two main mediators of the relationship between similarity and consumer behaviors. In word-of-mouth generation, pleasure and satisfaction turned out to be two important mediators. Both pleasure and arousal strongly mediated the relationship between similarity and intention to stay in the mall. Pleasure also fully mediated the relationship between similarity and congruity with mall image providing support for the mediated model hypotheses.

Based on the results of this study we can conclude that perceived similarity with other customers in retail situations has both direct and indirect causal relationships with important marketing outcomes measures. This confirms
conclusions by other researchers that similarity with other customers is important and should be taken into account while designing marketing programs (Grove & Fisk, 1997; Martin, 1996; Sirgy et al. 2000).

**Managerial Implications**

Our results suggest that retail managers should seek to increase customers' homogeneity and avoid heterogeneity. As a first step, they should measure perceived similarity among co-shoppers, which has a causal effect on important marketing outcomes; word-of-mouth, intention to stay, satisfaction and repurchase intention should alert retail managers to start measuring similarity in order to predict these marketing outcomes. Measurement is the first step in increasing customer homogeneity.

Both increased homogeneity and decreased heterogeneity call for more accurate segmentation and precise targeting. The objective of extreme homogeneity, however, collides with general objective of attracting large number of new customers. This research suggests that retailers should provide spaces in which, or time periods when different segments of similar customers will be attracted to congregate and shop. Retailers should provide options for customers to congregate into separate and thus more compatible surroundings. For example, restaurants typically separate the bar from the dining area, and may designate an area for families with small children. In a restaurant scenario, consumers should be allowed to change their seating or even go to another restaurant if they experience incompatibility with the other patrons. This strategy will reduce the negative effect of dissimilarity toward the service provider. Restaurant staff themselves may suggest relocation to new customers indicating the several areas designed to serve separate groups of customers, compatible within groups and incompatible across.

Alternatively, rather than physical segregation in diverse areas, the service provider can segregate across time periods; a theater offering a children's matinee is one example.

The negative effects of perceived incompatibility can be reduced by managing customer expectations prior to the visit. This recommendation is not new, as the need for better segmentation also addresses the same issue of increased targeting and, therefore, a better match of expectations and actual delivery of the service. For example, mall patrons may tell their customers to expect crowding and dissimilarity during the year end sales.

This research shows the importance of emotions in retail space. Retailers may consider mood manipulation and enhancement. They can consult the guidelines from marketers such as Disney that are very good at manipulating moods. The music, scenery, and manufactured scenes at the entrance to theme parks quickly and positively change consumers’ moods. Shopping malls have also moved in this direction by creating entertainment within their interiors. For example, the Mall of
the Americas in Minnesota has a roller coaster and an ice rink in the middle of the shopping facility.

Intention to stay, which is an important predictor of the amount of money spent during a shopping visit (Wangenheim & Bayón, 2004), has shown strong linkage with perceived similarity. Retailers go to great lengths to keep customers in the mall as long as possible. For example, the retail space is designed (e.g., Ikea’s race track design) to get customers to look at as much merchandise as possible. Other retailers provide food courts and child-care to entice customers to stay longer. However, it is not clear that layout and extra services increase perceived similarity among co-shoppers.

**LIMITATIONS AND DIRECTIONS FOR FUTURE RESEARCH**

Use of student data is the most serious limitation of this research. Although student data is used extensively in business research, it is no substitute actual mall data. Further research in this should collect data from actual shoppers with a minimum lapse time between mall visit and data collection.

We suspect that reaction to perceived similarity will vary along demographic and psychographic lines. There is sufficient evidence of differences in reactions to (dis)similarity based on factors such as gender, age, marital status, and shopping goals. It will be interesting to know how female shoppers react to (dis)similarity when compared to males. In addition, similarity according to different personal characteristics should be investigated. An extrovert may view the importance of similarity in ways that an introvert does not.

This research was conducted in a retail mall where similarity with other customers seems to be important. It is reasonable to assume that the relative impact of customer similarity will vary across industry types. Further research could identify the industries and contexts within them where similarity is critical.
References


Appendix A

The questions below relate to a shopping mall experience. Please recall your recent visit to a shopping mall and indicate your agreement or disagreement with the statements listed below by clicking on one of the seven buttons. Your response may range between strong agreement (if you click on button 7) and strong disagreement (if you click on button 1). Please answer all questions. Strict confidentiality will be maintained for the information collected through this survey.

**Perceived Similarity with other customers (n=225, Items=6, α=0.94) Modified from Sirgy et al., 1997)**

1. The typical customer in this shopping mall reflects the type of person I am.
2. The typical customer in this shopping mall is very much like me.
3. I can identify myself with the typical customer in this shopping mall.
4. The image of the typical customer is very dissimilar from the kind of person I am.
5. I feel close to other customers in this shopping mall.
6. The typical customer in this shopping mall is similar to me.

**Intention to stay (n=225, items=3, α=0.895)**

1. I plan to stay longer than planned.
2. I intend to check out more products than planned.
3. When shopping in this mall, I am not pressed for time.

**Self-congruity with mall image (n=220, items=3, α=0.855)**

1. This shopping mall reflects the type of person who I am.
2. I can identify myself with this shopping mall.
3. I feel happy shopping in this mall.
4. I feel close to this shopping mall.

**Repurchase Intention: (n=229, items=3, α=0.898), Hellier et al. (2003)**

1. I intend to continue shopping at this mall.
2. All things considered, I am likely to come back for shopping again.
3. My chances to continue patronizing this mall are high.

**WOM (n=227, items=3, α=0.866), Raajpoot, Sharma, Chebat (2009)**

1. I don’t hesitate to talk about this mall
2. I never recommend this mall.
3. I am happy to tell my friends this is a great place to shop.
Pleasure: Mehrabian and Russell (1974): (n=225, items=4, $\alpha=0.903$)

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<tr>
<th>Emotion</th>
<th>Scale</th>
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Arousal: Mehrabian and Russell (1974): (n=227, items=4, $\alpha=0.668$)

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Satisfaction: (n=207, items=3, $\alpha=0.851$) Fornell et al. (1996)

<table>
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<tr>
<th>Emotion</th>
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<td>Very Dissatisfied</td>
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<td>Not very close to the ideal</td>
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Exceeds Expectations

Very close to the ideal