Effects of Mall Atmosphere on Mall Evaluation: Teenage versus Adult Shoppers

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Abstract

What is the effect of mall atmosphere in mall evaluation? Is this effect mediated by self-congruity and functional congruity? Does the effect of mall atmosphere on mall evaluation differ between adult and teenage shoppers? If so how? The research reported in this paper attempts to answer the above questions. A survey of mall shoppers was conducted (N = 265) based on a mall intercept. The survey findings indicate that mall atmosphere positively affects functional congruity for both adults and teenage shoppers. However, as expected, the impact of atmosphere on self-congruity is only significant for teenagers. In turn, self-congruity and functional congruity positively affect mall evaluation for both adult and teenage shoppers.

KEYWORDS: mall evaluation, mall atmosphere, self-congruity, functional congruity, teenage shoppers, adult shoppers
Introduction

Representing 60 million consumers in America (Neuborne and Kerwin 1999), Generation Y is the most important demographic cohort after the baby-boomer generation (Foot and Stoffman 2000). Born between 1980 and 1995, these young consumers are today between 13 and 28 years old, half of which are teenagers (13-19 years old) (Foot and Stoffman 2000; Morton 2002). In addition to pure head counts, teenagers have significant buying power. Generation Y is the group of teenagers having the most money ever to spend - 51% more than the teenagers in 1995 (Morton 2002). The average teenager was estimated to spend more than 100 dollars per week (Zollo 2004).

Distinctive characteristics of the teenage market are well recognized in marketing. They have specific lifestyles, motivations and values (Zollo 1999). Consequently, the traditional marketing strategies used with baby-boomers are typically not efficient with young consumers (Bao and Shao 2002; Neuborne and Kerwin 1999). Moreover, the distinctive buying habits they display today will likely follow them as they enter the high-spending years of young adulthood (Neuborne and Kerwin 1999).

Shopping for teenagers is exciting, interesting, and fun (Taylor and Cosenza 2002). According to Mediamark Research Inc.’s Teen Market Profile, teenagers mainly shop in malls and visit shopping centers more often than other age groups (Quart 2004). They seem to prefer shopping in malls than on the Internet or by catalogue -- 44% of teenagers patronize their favorite mall during weekends (Zollo 2004).

These statistics are especially attention-grabbing in a context where traditional shopping mall markets are facing considerable competition from a variety of newer retail formats (Barnes 2005). In this mature environment, mall management has recognized the importance of an exciting atmosphere in order to attract and maintain traffic (e.g. Wakefield and Baker 1998). Although the influence of store atmospherics on shoppers’ attitude and
behavior has generated a great deal of interest in previous years (e.g. Turley and Milliman, 2000 for a review), the effects of mall atmosphere on teenagers has received little attention. This study investigates the mechanisms by which mall atmosphere affects mall evaluation among teenagers in the tail end of Gen Y and adult shoppers. We hypothesize that mall atmosphere affects teenagers’ mall evaluation mostly through self-congruity, whereas mall atmosphere influences adult shoppers’ mall evaluation mostly through functional congruity (i.e., merchandise perceived quality).

**Conceptual Development**

We first address the influence of mall atmosphere on perceived quality (functional congruity) and on self-congruity. Secondly, we explain how both functional congruity and self-congruity play important roles in predicting mall evaluation. Finally, we discuss how teenagers and adult shoppers follow different mediation path in the way mall atmosphere influences mall evaluation.

**Mall Atmosphere and Perceived Quality (Functional Congruity)**

Retail atmospherics can be traced back to Kotler (1973) who defined “atmospherics” as the conscious designing of space to create certain effects on buyers. “Atmospherics” contributes to the quality of the retail environment and represents a considerable differentiation aspect as a retailing strategy. Store (or mall) atmosphere has an effect on shoppers’ behavioral responses: cognitive (e.g. beliefs, categorization, symbolic meaning), emotional (e.g. mood, attitude) and physiological (e.g. pain, comfort, etc.). These behavioral responses, in turn, play an important role in shaping shoppers’ approach and avoidance motivation toward the store (or mall) at large (Bitner 1992). Thus, atmospherics is customarily used by retailers to attract and maintain traffic (Kotler 1973).
Based on inference theory (Nisbett and Ross 1980), shoppers use whatever available information cues, such as atmospherics cues, to evaluate unavailable, missing or difficult to evaluate information such as price and quality (Baker 1998; Huber and McCann 1982; Zeithaml 1988). Several store-related studies were able to demonstrate that shoppers make inferences about quality of merchandise using store atmospheric cues (e.g. Baker, Parasuraman, Grewal, and Voss 2002; Baker, Grewal and Parasuraman 1994; Espinoza, Liberali, and D’Angelo 2004; Mazursky and Jacoby 1984; Olshavsky 1985). In a shopping mall context, Chebat and Michon (2003) and Michon, Chebat and Turley (2005) found that the ambient scent (an atmospheric cue) influenced the perception of merchandise quality. Based on this discussion we will test the following hypothesis:

**H1:** Mall atmosphere positively affects perceived quality of merchandise at the mall.

That is, the more a mall is perceived as high in atmospherics (i.e., stimulating, bright, and interesting) the greater the perception that the mall has stores with quality merchandise. See Figure 1.

Mall Atmosphere and Self-congruity

Consumers’ evaluation of products, brands and stores are not only determined by functional criteria, such as quality, but also by symbolic or value-expressive criteria (e.g. Kressmann, Sirgy, Hermann, Huber, Huber, and Lee 2006; Sirgy 1982; Sirgy, Johar, Samli, and Claiborne 1991). Symbolic criteria refer to the stereotypic images of users of a product or a store (e.g. younger versus older consumers, high versus low socioeconomic status shoppers). The match between the stereotypic patron image and shopper’s self-concept (what has been referred to as self-image congruence or “self-congruity” for short) has been shown
to play a major role in store evaluations and patronage (see Sirgy, Grewal, and Mangleburg 2000 for a literature review).

Store atmospheric cues, location, merchandise, prices, and promotions mirror the image that patrons have of themselves. Chebat, Sirgy and St. James (2006) demonstrated, in a shopping mall situation, that the effect of mall image on store image can be explained by self-congruity. They observed that upscale malls generated higher levels of self-congruity that in turn enhanced store quality perceptions. In this context, it is likely that upscale malls have a higher degree of atmospherics (stimulating, bright, and interesting) than unfashionable malls. Shoppers are more likely to see themselves as stimulating, bright, and interesting. These are positive human traits (as opposed to boring, dull, and uninteresting). Because of the need for self-esteem, people in general are motivated to see themselves in a positive than negative light (Sirgy 1986). The above discussion suggests the following hypothesis:

\[H2: \text{Mall atmosphere positively affects self-congruity. That is, the more a mall is perceived as high in atmospherics (i.e., stimulating, bright, and interesting) the greater the perception that the mall is typically patronized by shoppers one can identify with (high self-congruity).}\]

See Figure 1.

The Effects of Perceived Quality (Functional Congruity) and Self-Congruity on Mall Evaluation

The effect of product quality on consumer behavior (product/brand/store attitude, preference, choice, purchase/patronage, satisfaction, and loyalty) is well documented in the consumer behavior literature (e.g., Bolton and Drew 1991; Brucks, Zeithaml, and Naylor 2000; Garvin 1987; Gotlieb, Grewal, and Brown 1994; Hurley and Estelami 1998; Zeithaml 2000). The influence of functional (i.e., quality) criteria in consumer decision-making has been referred to, in some circles, as “functional congruity” to distinguish it from “self-
congruity” (influence of symbolic criteria in decision making). In a retailing context, the positive relationship between perceptions of merchandise quality (i.e., functional congruity) and store evaluations is also well established in the literature (e.g. Baker et al 2002; Espinoza, Liberali, and D’Angelo 2004; Zeithaml 1988). Thus:

**H3:** Perceived quality of merchandise offered at the mall (functional congruity) positively affects mall evaluation. That is, the more a mall is perceived as having high quality merchandise (high functional congruity) the more favorable the mall evaluation. See Figure 1.

Several studies have also demonstrated that self-congruity enhances consumer’s store/mall image, attitude, preference, patronage intentions, actual patronage, satisfaction, and loyalty (e.g., Bellenger, Steinberg, and Stanton 1976; Chebat, Sirgy and St. James 2006; Sirgy et al. 1991; Sirgy and Samli 1985). Therefore we posit that:

**H4:** Self-congruity positively affects mall evaluation. That is, the more a mall is perceived as having patrons that shoppers can identify with (high self-congruity) the more favorable the mall evaluation. See Figure 1.

**The Teenagers versus Adults Moderation Effects**

We propose that the mechanism by which mall atmosphere affects mall evaluation varies depending on the age group (e.g. teenagers versus adult shoppers). The moderation hypotheses can be explained using Petty and Cacioppo (1986)’s *Elaboration Likelihood Model* (ELM). According to ELM, there are two distinct routes to persuasion leading to attitude change: the central and peripheral routes. The central route implies the processing of the message issue-relevant arguments (central merits) and requires additional cognitive effort. In contrast, peripheral cues (e.g. source expertise and attractiveness) can affect consumer’s attitude without any in-depth processing of the message arguments. The motivation and the
ability to process can moderate the route to persuasion by increasing or decreasing the
message arguments (e.g. central cues) processing. In other words, the importance of
peripheral cues in persuasion varies depending consumers’ motivation and ability to process
information. When individuals do not have the motivation and the ability (e.g. necessary
skills or experience) to process message issue-relevant arguments, they base their evaluation
on peripheral cues that are easier to evaluate (i.e., cognitively less-taxing).

As previously mentioned, store atmospherics is commonly used by retailers as an
information cue to help shoppers make inferences about other important cues such as price
and quality (Kotler 1973). In our model, mall atmosphere is used by shoppers to make
inferences about functional and symbolic criteria that shoppers use to evaluate the mall at
large. That is, high levels mall atmospherics (e.g., stimulating, bright, and interesting) may
lead to perceptions of high quality merchandise (high levels of functional congruity) and
perceptions that one can identify with the mall patrons (high levels of self-congruity).
Furthermore, based on ELM, an information cue can be processed using peripheral or central
cues, which in turn affects attitude. One can argue that merchandise quality (functional
congruity) can be considered as a central cue (e.g. central merit type of a message), whereas
symbolic information (self-congruity) is a peripheral cue. Mangleburg, Sirgy, Grewal,
Axsom, Hatzios, Claiborne, and Bogle (1998) conducted a study demonstrating this effect in
product context. Self-congruity message cues were treated as peripheral cues while
functional congruity cues were treated as central cues. The authors hypothesized that brand
attitude is likely to be more influenced by self-congruity (than functional congruity) when
consumers lack the ability and motivation to process message cues (novice consumers).
Conversely, brand attitude is likely to be more influenced by functional congruity (than self-
congruity) when consumers have the ability and motivation to process (consumers highly
familiar with and interested in the product category). The results of this study confirmed
these hypotheses. Sirgy, Grewal and Mangleburg (2000) proposed a similar moderating effect in a retailing context. Shoppers having more experience and knowledge are likely to be better equipped to evaluate stores’ functional attributes. In contrast, novice shoppers may not be able to evaluate the utilitarian criteria and thus rely on more simplistic cues, such as patron image. Thus, functional criteria (e.g. quality) have more impact than self-congruity on experienced shoppers’ patronage behavior, and the opposite should apply for the less-experienced shoppers.

Given their age, teenagers are usually less experienced consumers than adults; they become more skilled in shopping as they get older (Moschis and Churchill 1979; Moschis and Moore 1978; Shim 1996). For example, Mallalieu and Palan (2006) investigated teenagers’ competence in a retail setting. They interviewed 31 teenage girls (13-14 years) and found that young consumers are aware of brands, are conscious of store image, and have clear preferences for some stores. However, many have trouble making purchase decisions, are not confident in their purchases, need advice to help them make their decisions, and are unwilling or unable to efficiently use much information available to them in a retail setting (e.g., many reported that they avoid some stores and are not comfortable in interacting with salespeople). The authors concluded that: “as teenagers acquire more expertise and experience as shoppers and as they mature mentally in term of brain function, many of self-confidence and self-control issues that seem to affect their ability to utilize retail resources effectively may diminish.”

Moreover, the social dimensions of shopping are very important for young shoppers. Shopping malls represent social and experiential meeting places for young consumers where they like to spend their free time and to hang out with friends (e.g., Haytko and Baker 2004; Taylor and Cosenza 2002; Wilhelm and Mottner 2005; Zollo 2004). Indeed, being with friends is what teenagers like the most about shopping (e.g., Tootelian and Gaedeke 1992).
and peers represent their main source of information for making purchase decisions (e.g., Mallalieu and Palan 2006; Mangleburg, Doney and Bristol 2004; Moschis and Moore 1978) in product categories such as clothes and accessories, food consumed outside the home, and gifts (e.g., Tootelian and Gaedeke 1992). These findings underscore the important role of symbolic cues (i.e., self-congruity) in mall evaluation.

In relation to adult shoppers, there is suggestive evidence that consumer evaluation of products/brands/stores is more influenced by functional congruity (e.g. functional criteria) than by self-congruity (e.g. Sirgy et al. 1991; Sirgy and Samli 1985). Thus, we argue that, in evaluating a mall, teenagers are more motivated to process symbolic criteria, (e.g. self-congruity) than utilitarian criteria (e.g. merchandise quality) compared to adult. We suggest that peripheral cues (symbolic criteria leading to self-congruity) are more important determinants in mall evaluation than central cues (functional criteria such as merchandise quality leading to functional congruity) for teenagers (than adults). Conversely, central cues are more important in mall evaluation for adults (than teenagers). Formally stated,

\[ H5: \text{The effect of self-congruity on mall evaluation is more important for teenage than adult shoppers}. \]  See Figure 1.

\[ H6: \text{The effect of functional congruity on the mall evaluation is more important for adult than teenage shoppers}. \]  See Figure 1.

The Relationship between Functional Congruity and Self-Congruity vis-à-vis the Age Groups

As already stated, shoppers are likely to use different cues available in the retail environment (e.g. atmosphere and quality) to make inferences about patrons of a store (Sirgy, Grewal and Mangleburg, 2000). The perceived quality of products offered at the mall has
also been shown to predict self-congruity (El-Hedhli, Chebat and Sirgy 2009). In other words, functional congruity may positively influence self-congruity in a mall setting.

However, there is also some support in the literature for the inverse relationship. Self-congruity tends to bias functional congruity. Shoppers who experience high levels of self-congruity evaluate store functional attributes in a more favorable light than those who experience low levels of self-congruity (Sirgy and al., 1991; Sirgy, Grewal and Mangleburg, 2000). This biasing effect was also demonstrated in a mall context. Chebat, Sirgy and St-James (2006) found that the higher the self-congruity the more likely the stores in a mall are perceived as having high quality.

As pointed out, adult shoppers have the motivation and the ability to process central quality cues better teenagers. We hypothesize that adults are more likely to use functional cues about the mall to make inferences about patrons of a store. In other words, perceptions of quality should influence adult shoppers’ self-congruity experience. On the other hand, teenagers do not have the motivation and the shopping skills to process central cues, such as merchandise quality. We believe that teenagers are more likely to use symbolic cues about the mall to make inferences about the quality of the merchandise in the mall. Formally stated:

\[ H7: \text{Functional congruity (perceived quality of mall merchandise) positively affects self-congruity for adult shoppers.} \] See Figure 1.

\[ H8: \text{Self-congruity positively affects functional congruity (perceived quality of mall merchandise) for teenage shoppers.} \] See Figure 1.

**Method**

The survey took place early in a Montreal urban-core shopping mall. Data were collected in seven consecutive days in April during the mall business hours. Mall intercept was used to
administer the questionnaire. Participants were intercepted at the mall while they were shopping and asked to complete a survey. The questionnaire was developed in both English and French. The survey items were first translated into French and then translated back into English.

The original cohort was trichotomized by age group (15-18 years, 19-24, and 25 years plus). The model was tested across the younger and older groups. The middle group was left out because it is transitional from adolescence to adulthood. Their inclusion in the model would have generated too much noise. In total, 265 usable questionnaires were retained: 153 adults (25 to 64 years old) and 112 teenagers (15 to 18 years old).

Seventy percent of the adult participants were between the age of 25 and 34, 16 percent between 35 and 44, and 14 percent 45 or older. The adult sample contained 77 men and 76 women, whereas the teenage sample contained 23 men and 89 women. Slightly more participants were French-speaking in both adult (63%) and teenage (66%) samples. The distribution of English-speaking and French-speaking shoppers was similar between the two samples ($\chi^2 = 0.20, df = 1, p = 0.70$). However, gender distribution was significantly different between the two groups ($\chi^2 = 24.43, df = 1, p = 0.00$). In the preliminary analyses, we controlled for the potential effect of gender. The direct and moderator effects of age group and gender were simultaneously investigated. Gender was found to have no direct or moderator impact on all latent variables except for a direct impact on mall evaluation ($b = -0.28, p = 0.08$). Men evaluated the mall more positively than women.

The Measures

Three items from Fisher’s (1974) environmental quality scale were used to measure mall atmosphere. Self-congruity was measured with two items adapted from Sirgy, Grewal, Mangleburg, Park, Chon, Claiborne, Johar, and Berkman (1997). Merchandise perceived
quality offered at the mall (functional congruity) was measured with three items adapted from Bellizzi, Crowley and Hasty (1983). Finally, mall evaluation was measured with a 10-point bipolar scale adapted from Bolton and Drew (1991). Demographic items (e.g., age, gender) were also included in the questionnaire. The actual indicators, including confirmatory factor analysis loadings are shown in Table 1.

*************** Insert Table 1 about here **********************

Results

EQS 6.1 for Windows (Bentler 2004) was used to estimate the structural equation models under the maximum likelihood estimation (ML) method. H1 to H4 were first tested within the pooled sample of adult and teen shoppers. H7 pertaining to adults and H8 to teenagers were tested with their respective samples. H5 and H6 comparing adult and teenagers were tested using an invariant multi-group model.

Findings related to H1-H4 show an adequate fit ($\chi^2 = 50.27$, $df = 22$, $p = 0.16$, CFI = 0.977, RMSEA = 0.07, SRMR = 0.06). As observed later on, the model fit is shown to improve further as additional hypotheses are added. Mall atmosphere was successful in predicting functional congruity (estimate = .72; t-value = 9.30) and accounting for 52.5% of the variance in functional congruity. This result provides support for H1. H2 was also supported. Mall atmosphere was successful in predicting self-congruity (estimate = .45; t-value = 6.55) and accounting for 20.6% of the variance in self-congruity. H3 and H4 were supported too. Functional congruity was successful in predicting mall evaluation (estimate = .47; t-value = 8.52). Self-congruity was also successful in predicting mall evaluation (estimate = .43; t-value = 7.41). Both predictors accounted for 54.3% of the variance in mall evaluation. In short, the perception of the mall atmosphere influences both functional and self-congruity, and the latter influence mall evaluation (Table 2).
H7 and H8 were tested ahead of H5 and H6 because of potential indirect effects on shoppers’ mall evaluation. The hypothesized impact of functional congruity (perceived quality of mall merchandise) on self-congruity (H7) among adult shoppers was supported by the data (estimate = .52; t-value = 5.55). However, with the introduction of this path (functional congruity \(\rightarrow\) self-congruity) the influence of mall atmosphere on self-congruity becomes fully mediated by functional congruity. The resulting model for adult shoppers is perfectly acceptable (\(X^2 = 36.97, df = 23, p = .03, CFI = .98, RMSEA = .06\)). Previous research shows that retail and mall atmospherics have a direct effect on the perception of product quality (Laroche, Teng, Michon, and Chebat 2005).

With teenagers who lack shopping experience, self-congruity is likely to affect the perception of product quality (functional congruency). As posited by the self-congruity theory (Sirgy, Grewal and Mangleburg 2000) and ELM (Petty and Cacioppo 1986), H8 cannot be rejected (estimate = .30; t-value = 2.36). With the addition of a path from self-congruity to functional congruity, the explained variance of functional congruity jumps from 52.5 to 69.2 percent. The model for teenagers alone offers an excellent fit (\(X^2 = 23.10, df = 22, p = .40, CFI = .99, RMSEA = .02\)).

In order to test H5 and H6, we compared the two cohorts using an invariant multigroup analysis (e.g. Bollen 1989, p. 355-364). Invariance is assessed by constraining observed indicators, error correlations, and paths between latent constructs. The results did not support H5 and H6. The path from functional congruity to mall evaluation (unstandardized coefficient = .90, t-value 8.31) and from self-congruity to mall evaluation (unstandardized coefficient = .41, t-value 5.99) are identical for both groups (see Figure 2).
Contrary to single sample SEM, intergroup comparisons must use unstandardized coefficients (Kline 2005, p. 289-295).

The multigroup model also outlines that the influence of the mall atmosphere on functional congruity (coefficient = .56, t-value = 8.96) is invariant across groups. The direct effect of the mall atmosphere on self-congruity is only significant with teen shoppers (coefficient = .81, t-value = 5.07). As observed when testing for H2 and H7 among adults, the impact of the mall atmosphere of self-congruity is fully mediated by functional congruity (coefficient = .70, t-value = 5.68).

With teenagers (H8), self-congruity influences functional congruity (coefficient = .13, t-value = 2.39). The multigroup path analysis yields an excellent fit ($X^2 = 70.21$, $df = 54$, $CFI = .99$, $p = .07$, $RMSEA = .05$). Of course, reversing the path from functional to self-congruity would provide a similar fit but would not be theory-driven.

The hypotheses were tested incrementally. H1 to H4 were tested first within a pooled sample. The initial model had an average Chi-square value of 1.73 per degree of freedom (see Table 3). H7 and H8 were specific to adults and teenagers respectively. The mean Chi-square value per degree of free was marginally improved for adults (1.61) and significantly reduced for teens (1.05). The final multigroup model incorporates all eight research hypotheses at once and has an average Chi-square value per degree of freedom of 1.30. Despite its apparent complexity, the multigroup invariant path analysis (shown in Figure 2) has no negative effect on the model parsimony and even contributes to a better fit.
Discussion

Mall atmosphere is an effective message-creating medium (Kotler 1973) for mall managers by which they can effectively provide information to their consumers that would impact their attitude toward the mall. Indeed, consistent with past research, mall atmosphere provides information to mall shoppers about self-congruity (cf. Sirgy, Grewal and Mangleburg 2000) directly for teenagers and indirectly for adults through functional congruity. Mall atmosphere also provides information about functional congruity (cf. Chebat and Michon 2003), which in turn influences their mall evaluation. However, adult and teenage consumers do not use mall atmospheric cues in the same way. The mechanism by which mall atmosphere influences mall evaluation differs depending on whether the shoppers are teenagers or adult.

Self-congruity is central in explaining the differences between the two age groups. Consistent with past studies, self-congruity plays only a secondary role (e.g. Sirgy and al. 1991) in the evaluation of shopping malls among adult shoppers. Functional congruity (i.e., quality) plays a primary role. Cues from mall atmosphere are decoded in terms of functional congruity, which in turn are used by adult shoppers to make self-congruity judgments. Thus, adult shoppers seems to employ the central route to persuasion implying that these consumers engage in deep processing of the message issue-relevant arguments such as mall quality (Petty and Cacioppo 1986).

The converse seems to be true among teenagers. That is, self-congruity plays a primary role, whereas functional congruity has a secondary role. The information embedded in mall atmosphere seems to be decoded by teenagers in terms of both symbolic cues (self-congruity) and utilitarian cues (e.g. merchandise quality). Because teenagers are usually less knowledgeable consumers than adults and because the social dimension of shopping is very important for young consumers, we argue that teenagers don’t have the necessary skills and the motivation to process central functional cues, such as merchandise quality, independently
of the peripheral cue (Petty & Cacioppo, 1986). We thus suggest that teenagers’ quality perceptions are biased by their self-congruity experience meaning that teenagers are more likely to evaluate merchandise quality in a favorable way when they experience self-congruity. This partly explains that merchandise perceived quality is judged as higher by teenagers than by adults.

Consistent with past research (e.g. Mangleburg, Doney and Bristol, 2004; Wilhelm and Mottner, 2005), these findings highlight the importance teenagers, promotional messages should focus on self-congruity experience (i.e., images of teen friendly malls that would allow teenagers to identify themselves with the mall shoppers). Obviously, a shopping mall cannot target only teenage or adult consumers. For this reason, creating different sections in the shopping mall (e.g. teen friendly sections and adult sections) could represent an effective solution. Adult sections should focus on aspects related to mall quality such as merchandise quality, whereas teenager sections should focus on social dimensions such as young salespeople, youthful music, and teenage-friendly décor.

Future Research and Study Limitations

Additional research is necessary to confirm and generalize these findings. First, it is important that this study be replicated with other dependent measures such as mall patronage and loyalty. Second, the study should be replicated with data collected from a variety of malls that differ in their image characteristics to ensure generalizability of the study findings.

Third, our moderation hypotheses are based on the proposition that teenage and adult shoppers have different shopping motives and thus process the information about mall atmospherics differently. Adult shoppers use mall atmospheric cues to make inferences about merchandise quality in the mall (central processing), whereas teenagers use the same cues to make inferences about the social dimensions of the mall (peripheral processing).
However, this theoretical proposition is theory driven at this point (i.e., was not directly tested in the current study). To provide a direct test of this proposition, measures of cognitive ability and involvement have to be used to test the ELM explanation directly.

Finally, our study findings and past research indicate that self-congruity is a central concept in better understanding teenagers’ shopping psychology. However, self-congruity in a mall context has, to our knowledge, never been empirically studied with a teenage population. Mall atmospherics can be investigated in greater detail as an antecedent condition that prompts teenage shoppers to experience high levels of self-congruity (e.g. store design, employees’ characteristics, type of music) (Taylor and Cosenza 2002).
References


*Servicescapes: The Concept of Place in Contemporary Markets*, John F. Sherry Jr.,

Multiple Store Environment Cues on Perceived Merchandise Value and Patronage

Environment on Quality Inferences and Store Image,” *Journal of the Academy of
Marketing Science*, 22 (4), 328-339

Bao, Yeging and Alan T. Shao (2002), “Nonconformity Advertising to Teens,” *Journal of


Bellenger, Danny N., Earle Steinberg and Wilbur W. Stanton (1976), “The Congruence of


Multivariate Software Inc.

Bitner, Mary Jo (1992), “Servicescapes: The Impact of Physical Surroundings on Customers
and Employees,” *Journal of Marketing*, 56 (2), 57-71.


Assessments of Service Quality and Value,” *Journal of Consumer Research*, 17 (4),
375-384.


Table 1
Standardized Measurement Indicators (Test Statistics)

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor loadings</th>
<th>Coefficient Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mall atmosphere</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fisher (1974) – 3 items (7-point scales)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Up to which point is each one of the following adjectives appropriate with what you perceived today of the environment of this shopping center</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Boring / Stimulating</td>
<td>.81</td>
<td>0.80</td>
</tr>
<tr>
<td>- Dull / Bright</td>
<td>.81 (14.47)</td>
<td></td>
</tr>
<tr>
<td>- Uninteresting / Interesting</td>
<td>.86 (15.64)</td>
<td></td>
</tr>
<tr>
<td><strong>Functional Congruity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bellizzi, Crowley and Hasty (1983) – 3 items (7-point scales)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- How would you qualify the style of the products proposed in this shopping center: outdated / up to date</td>
<td>.74</td>
<td></td>
</tr>
<tr>
<td>- Is the product selection of this shopping center inadequate/adequate</td>
<td>.84 (11.56)</td>
<td>0.81</td>
</tr>
<tr>
<td>- The quality of the products available in this shopping center in rather low / high</td>
<td>.82 (11.34)</td>
<td></td>
</tr>
<tr>
<td><strong>Self-congruity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sirgy and al. (1997) – 2 items (7-point scales)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- I can identify with the typical customer who shops at this shopping mall</td>
<td>.88</td>
<td>0.81*</td>
</tr>
<tr>
<td>- The typical customers at this shopping mall are very much like me</td>
<td>.79 (10.75)</td>
<td></td>
</tr>
<tr>
<td><strong>Mall evaluation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bolton and Drew (1991) – 1 item (10-point scale)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Globally, is your evaluation of the shopping centre? Clearly below/above your expectations</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pooled Sample; standardized coefficients (t-values) and Alpha coefficients

* Two-item alpha coefficient (e.g., Hulin et al 2001)
Table 2
Hypotheses Testing

<table>
<thead>
<tr>
<th>Testing</th>
<th>Sample</th>
<th>Path</th>
<th>Std. Coeff. (Test Statistics)</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>Pooled</td>
<td>F1→F2</td>
<td>.72 (9.30) R² = .55</td>
<td>Accepted</td>
</tr>
<tr>
<td>H2</td>
<td>Pooled</td>
<td>F1→F3</td>
<td>.45 (6.55) R² = .21</td>
<td>Accepted</td>
</tr>
<tr>
<td>H3</td>
<td>Pooled</td>
<td>F2→F4</td>
<td>.47 (8.52) R² = .54</td>
<td>Accepted</td>
</tr>
<tr>
<td>H4</td>
<td>Pooled</td>
<td>F3→F4</td>
<td>.43 (7.42) R² = .54</td>
<td>Accepted</td>
</tr>
<tr>
<td>H7</td>
<td>Adults</td>
<td>F2→F3</td>
<td>.52 (5.55) R² = .27</td>
<td>Accepted</td>
</tr>
<tr>
<td>H8</td>
<td>Teens</td>
<td>F3→F4</td>
<td>.30 (2.36) R² = .69</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Invariance

<table>
<thead>
<tr>
<th></th>
<th>Multigroup</th>
<th>T(F3→F4)&gt;A(2→F4)</th>
<th>Unreleased</th>
<th>Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td>H5</td>
<td>Multigroup</td>
<td>A(F2→F4)&gt;T(2→F4)</td>
<td>Unreleased</td>
<td>Rejected</td>
</tr>
</tbody>
</table>

F1 = mall atmosphere; F2 = functional congruity; F3 = self-congruity; F4 = mall evaluation;
A = Adults; T = Teens
H7: The effect of F1→F3 is fully mediated by F2

Table 3
Model Hierarchies

<table>
<thead>
<tr>
<th>Incremental Testing</th>
<th>Dataset</th>
<th>X²</th>
<th>df</th>
<th>X²/df</th>
<th>CFI</th>
<th>RMS EA</th>
<th>SRM R</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1, H2, H3, H4</td>
<td>Pooled</td>
<td>96.97</td>
<td>56</td>
<td>1.73</td>
<td>.97</td>
<td>.08</td>
<td>.09</td>
</tr>
<tr>
<td>H1, H2, H3, H4, H7</td>
<td>Adults</td>
<td>36.92</td>
<td>23</td>
<td>1.61</td>
<td>.98</td>
<td>.06</td>
<td>.03</td>
</tr>
<tr>
<td>H1, H2, H3, H4, H8</td>
<td>Teens</td>
<td>23.10</td>
<td>22</td>
<td>1.05</td>
<td>.99</td>
<td>.02</td>
<td>.04</td>
</tr>
<tr>
<td>H1, H2, H3, H4, H7, H8, H5, H6</td>
<td>Multigroup Invariance</td>
<td>70.21</td>
<td>54</td>
<td>1.30</td>
<td>.99</td>
<td>.05</td>
<td>.05</td>
</tr>
</tbody>
</table>
Figure 1
Conceptual Model

H5

Mall Atmosphere (F1)

H1

H2

Functional Congruity (F2)

H3

H4

Self-congruity (F3)

Mall Evaluation (F4)

H7

H8

Figure 2
Multigroup Path Analysis

Mall Atmosphere (F1)

T = .81
(5.07)
A = n.s.

.56 (8.96)

A =.70
(5.68)

.90 (8.31)

.41 (5.99)

Self-congruity (F3)

Mall Evaluation (F4)

T = .13
(2.39)

Method = ML; $\chi^2 = 70.21$, $df=54$, $p= 0.07$; CFI=0.99; RMSEA=0.05, SRMR= 0.05
A= Adults; T= Teenagers. All paths constrained except otherwise indicated.
Unstandardized Coefficients with Test Statistics