

# Consumer Perceptions of Higher and Lower-Level Designed Store Environments

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# Consumer Perceptions of Higher and Lower-Level Designed Store Environments

## **Abstract**

*The role and influence of aesthetics in the consumption of store environments remains poorly understood. Little is known about how aesthetics propose substantial or adjunctive roles in consumers' store experiences. The aim of this paper is to examine consumer perceptions of store design-architecture in higher and lower-level design contexts. Building on the aesthetics, and environmental psychology literatures, our findings confirm consumers' determinations of perceptual differences in the aesthetic content contained in presented store environmental stimuli. Latent-means comparisons confirm consumers' perceptions of the presence of a higher-level design in one fast-fashion store with a lower-level design of a second store of the same retailer using a Confirmatory Factor Analysis (CFA). The results demonstrate the reliability and validity of the proposed constructs in confirming the presence of higher and lower-levels of design. This research thus expands on the extant number of store specification and response constructs and prospectively opens up new lines of store environments research.*

**Keywords:** retail design-architecture, store prototype, store novelty, store aesthetic pleasure

## **Introduction**

The role and influence of aesthetic content in the development of store environments is generally poorly understood in the extant literature (Klingman 2008; Eroglu and Machleit 2008; Baker et al. 2002; Donovan and Rossiter 1982). Despite some recent works comparing the effects of store remodelling on new and existing consumers (Dagger and Danaher 2014), and consumer responses to overstyling in designs (Hagtvedt and Patrick 2014), very little remains known about consumers' preferences for familiar store environments (with identically replicated and standardised design elements) compared to their preferences for differentially designed ones. Understanding how differentially designed environments, where higher and lower levels of design are observed across the store network, is nevertheless concurrent with how aesthetic content has been considered and conceptualised within marketing research (Holbrook 1980; Hirshman and Holbrook 1982; Venkatraman and MacInnis 1985). This is to say: the artist first produces an aesthetic product that flows from their internal needs and desires, sometimes irrespective of commercial realities. The artist's desire for originality in their aesthetic creations could then be potentially compromised by the marketer's requirements for standardised design practices in the pursuit of efficiency and commercial objectives (Martindale 1990). The presence of the 'aesthetic' in the experiential consumption of store environments therefore demands reconciliations of the conflicting demands of aesthetic creation with commercial marketing objectives.

Consumer aesthetics considers the buyer's cognitive, affective, and behavioural responses with hedonic value as well as profound experience as particular aesthetic responses (Holbrook 1980). Consumers therefore imbue products and consumption practices with strong emotional and subjectively-held meanings that supplement the presence of concrete attributes (Hirschman and Holbrook 1982). The interpretation of the consumer response to aesthetic

content is however considered to be more emotionally-valanced than some aesthetics studies considerations of the same response (see Charters 2006; Martindale and Moore 1988; Whitfield 2009).

Charters (2006) argued that aesthetic and hedonic decisions are not synonymous, thereby challenging the commonly held interpretation of aesthetics held by consumer behaviour researchers, such as Holbrook (1980), Hirshman and Holbrook (1982), Venkatraman and MacInnis (1985). Hedonic consumption decisions involve pleasure and aesthetic responses that activate multi-sensory, fantasy, and emotive aspects of experience (Venkatesh and Meamber 2008). The aesthetic response can also be more cognitively experienced, and the emotional response can be relatively mild (Martindale and Moore 1988). The issue of disinterested attention, and the related issues of objective-subjective taste: what the individual actually undergoes during the aesthetic encounter, and the relationship of evaluation to pleasure are considered important to the aesthetic experience (Charters 2006), and, if addressed, could help to clarify the conceptual ambiguities that currently exist between marketing and aesthetics understandings of the aesthetic pleasure response. Consideration of what may be termed the 'aesthetic experience' in the aesthetics and marketing literatures consequently demands a knowledge of the basis of pleasure, and how experiential and symbolic consumption possess defined cultural reference points (Venkatesh and Meamber 2008). This demands an understanding also of how aesthetics assumes either substantial or adjunctive roles in consumption, and the need to address the nature of the functional role of the aesthetic (Whitfield 2009; Vilnai-Yavetz and Koren 2015; Homburg, Schwemmler and Kuehnl 2015).

The approach, advanced in this paper, distinguishes between consumers' perceptions of store environments, and aims to add to the extant knowledge of how aesthetics assumes a substantial role rather than an adjunctive role in store environments perceptions. In investigations of coffee shops and hedonic service consumption, Walsh et al. (2011), Hightower, Brady and Baker (2002), Wakefield and Blodgett (1994, 1996), demonstrate how the servicescape has a positive and significant effect on satisfaction, loyalty, and behavioural intentions. The servicescape positively influences perceptions of service quality, which, in turn, impacts value perceptions and behavioural intentions (Hightower, Brady and Baker 2002). Respondents who perceive the aesthetic servicescape to be of high quality report higher levels of satisfaction and excitement with the servicescape (Wakefield and Blodgett 1994, 1996). Certain retailers, such as Prada, for example, can thus deliberately use the store environment to deliver their customer experiences and observe design-architecture as central to brand expression. Discount retailers, such as Aldi or Lidl, in contrast, tend to use the store environment to emphasise low price points and functional objectives.

The structure of this paper is as follows: after describing the practical and theoretical relevance of this research, we develop a conceptual model based on the extant literature on store design and retail environment. Here we explore how prototypicality, novelty, and aesthetic pleasure can be examined in higher and lower-level design contexts. We thus propose some initial steps that examine the relationship between prototypicality, aesthetics and the meaning of store environments for consumers. Thereafter, we present the methodology of our empirical research, and describe and discuss the main results for two stores of the same fast-fashion retailer with higher and lower-level designs. We then conclude with an outlook for further research.

## **Literature review**

The emergence of constructs that can parsimoniously capture the complexity and reflect the multiple cues, messages, and signals contained in the store environment have been limited to date. Although calls have been made by McGoldrick (2002), Eroglu and Machleit (2008), and Teller and Dennis (2012), for studies of the store environment to progress beyond employing singular atmospheric variables (e.g. music and olfactory investigated separately), few efforts advance explanations of consumers' holistic processing of multiple cues and atmospheric stimuli are contained in extant store environments research.

Of the very few holistic models proposed in the literature, Bitner (1992) was one of the first to describe how the servicescape affects both consumers' and employees' cognitive, emotional, and physiological responses toward the environment. Three composite dimensions of the servicescape were identified: ambient conditions; spatial layout and functionality; and signs, symbols, and artefacts. Quality of materials, for instance, could conceivably cue symbolic meanings in creation of an overall aesthetic impression. However, the Bitner (1992) framework, although comprehensive in its conceptual breadth, is not process and methods suggestive, and few approaches to the investigation of the environment are outlined. The global holistic and its attributes in the study of artefacts, Rafaeli and Vilnai-Yavetz (2004) argue, are however not advanced by proposals of yet more classification systems, such as the Bitner (1992) approach. Implicit in any work that resembles a categorisation scheme is the assertion that categories are mutually exclusive, where meaning of the artefact resides in one discrete category or another. Few of the classification analyses reveal multi-dimensionality and coherent theories of how artefacts operate together in empirically tested frameworks (Rafaeli and Vilnai-Yavetz 2004).

Studies that do empirically examine consumer holistic perceptions of the store environment, such as Baker, Berry and Parasuraman (1988), Baker et al. (2002), Dagger and Danaher (2014), Johnson et al. (2015), Sherman, Multhur and Smith (1997), McGoldrick and Pieros (1998), are more notable in their examinations of aesthetics, design, atmosphere, image, and perceived environment constructs. Their respective examinations of design or related constructs evidences a process for determining environmental preferences, and advance the study of inference making, affordance, and schema theory (Baker et al. 2002) that underpin global-attribute evaluations of store environments.

Similarly, Nasar (1994, 2002), Whitfield (2009), Hekkert (2014a, 2014b) and Kaplan (1987) present approaches which go beyond simple classification systems of describing the bases of perception of the store environment to also suggest how dimensions of evaluative responses and preferences for environments can be explained by: complexity, mystery, and coherence (Kaplan 1983, 1987); and formal, symbolic, and schema (Nasar 1994). Kaplan (1983), for instance, proposes a model of evolutionary person-environment compatibility where goal-directed, adapting activity are stressed. Purposeful action on the part of the consumer is a product of their ability to address legibility issues contained in the environment.

Although the contributions of Baker, Berry and Parasuraman (1988), Baker et al. (2002), McGoldrick and Pieros (1998), Bitner (1992), Kaplan (1983, 1987), and Nasar (1994, 2002) are notable, and go further in reflecting the transactional dynamics of human-environment exchange, arguably the most influential perspective on the study of store environments originates from the environmental psychology literature (Mehrabian and Russell 1974; Donovan and Rossiter 1982).

Environmental psychology contributions reflects consideration of cognitive, humanistic, learning or behavioural, neurobiological, and sociocultural concerns in a holistic manner (Kopec 2006). The fundamental psychological processes of arousal, overload, affect, adaptation, and personal control are examined, where stimulation thresholds and adaption explain dynamic human responses to information and arousal properties in the environment (Kopec 2006; Saegert and Winkel 1990). Four determinants of arousal: psycho-biological, ecological, collative, and arousal potential are identified by Berlyne (1971). The hedonic tone and arousal basis of aesthetic judgment proposed by Berlyne (1970, 1971, and 1974) was notably subjected to testing by Mehrabian and Russell (1974), Donovan and Rossiter (1982). Factor analyses revealed novelty, complexity, and spaciousness (Mehrabian and Russell 1974), and novelty, variety, irregularity, density and size (Donovan and Rossiter 1982) as collative stimulus or store specification variables. A high information-loaded environment (e.g. novel, surprising, crowded) will make a person feel stimulated and excited, whereas a low information-loaded environment will result in feelings of calm, relaxation, or even sleepiness (Donovan and Rossiter 1982).

There is a qualified support for the Berlyne collative-motivational hypothesis that the collative or store specification constructs promote an understanding of organism (pleasure, arousal, dominance) and responses (approach/avoidance) in studies of store environments (e.g. Donovan and Rossiter 1982; Donovan et al. 1994; Tai and Fung 1997; Gilboa and Rafaeli 2003). Besides slightly different findings in the Donovan and Rossiter (1982) and Donovan et al. (1994) replication of this research, further questions surrounding the uni-dimensional nature of the constructs, and the bi-directional nature of the associations between pleasure and arousal are identified by Van Kenhove and Desrumaux (1997), and Miniero, Rurale and Addis (2014). Pleasure (or certainly displeasure) and arousal, Tai and Fung



(1997) propose, cannot for instance confirm approach behaviours towards store environments. The demands by Donovan and Rossiter (1982) themselves for further work in modifying the SOR model have largely gone unheeded. Further developments and innovations of a global information rate measure in particular have not emerged since Mehrabian and Russell (1974).

### **Hypotheses development**

Studies of aesthetics need to reflect complex, appraisal-like processes with cognitive, emotional, and sensory levels of interpretations (Whitfield 2009; Hekkert 2014a, Hekkert 2014b). Moreover, as noted above, Eroglu and Machleit (2008), Teller and Dennis (2012), and McGoldrick (2002), are among the authors who have noted the major bias of research on store environments on singular atmospheric variable studies. This research proposes that consumers' holistic perceptions of the store environment are influenced by perceptions of store prototype, store novelty, and store aesthetic pleasure. The basis of store aesthetic pleasure is in the absence of consideration of consumers' motivations or expertise largely intrinsically bound (Whitfield 2009; Charters 2006). The examined hypotheses thus elevate our understanding of consumer perceptions of the store environment in higher and lower-level design contexts.

*Store novelty:* Artistic expression thrives on the basis of novelty and newness where the success of an artwork lies in its individuality and difference from preceding artworks (Martindale 1990). An ordered disorder, or unity, is central to understanding the success of artworks where variety and incongruity enable differentiation (Martindale 1990). The marketing literature similarly acknowledges the importance of novelty, but also stresses the importance of awareness, associations, image (Keller 1993; Aaker 1991), and the attainment of salience and familiarity. Innovativeness, novelty seeking, and consumer creativity, are

identified as important when making predictions about consumer behaviour (Hirschman 1980). Novelty suggests the receptiveness to new ideas, the preparedness to make independent decisions, the desire to seek out novel information, and stimulus variation to sometimes overcome boredom and fatigue (Hirschman 1980). Consumers are often attracted by new, unusual, and innovative products with maximal unity and prototypicality (Veryzer and Hutchinson 1998).

*Store prototype:* Visual preference as proposed by Biederman and Vessel (2006) only emerges when we are able to identify and successfully process what we see, or, in other words, when the new stimulus is not too incongruous to previous experience (Hekkert 2006; Mandler 1982). Novelty is a relative perception according to Berlyne (1971), and constitutes a relative newness to the existing prototype and schema in the minds of consumers. The aesthetics unity-in-variety principle proposed by Hekkert (2006, 2014a) similarly emphasises adaptational effects in relating incoming information to existing knowledge. The easy identification of the shared attributes of the prototype promotes a preference for the prototype given the familiarity of the stimulus to the perceiver (Martindale 1984; Martindale and Moore 1988; Martindale, Moore and Borkum 1990).

*Store prototype and store novelty:* No previous attempts have been made to simultaneously measure both store prototypicality and store novelty. In the very limited attempts to examine typicality and novelty associations in the aesthetics literature (e.g. Hekkert, Snelders and van Wieringen 2003; Thurgood, Hekkert and Blijlevens 2014), introductions of novelty are found to both weaken and strengthen perceptions of the presence of the prototype depending on the items chosen in the measurement of the constructs.

The current research operationalises this process of perception and how separate and integral attribute combinations are perceived to be present and identifiable in higher and lower-level designed stores. It is proposed in hypothesis numbers one and two that consumers can identify significant differences in the presence of store novelty and store prototypicality across the higher and lower-level designed stores. In essence, this means that consumers can perceive the presence of novelty introductions in the higher-level designs.

*H<sub>1</sub>: There is a significant difference between the perceptions of the novelty of stores with a higher-level store design as compared to stores with a lower-level design.*

*H<sub>2</sub>: There is a significant difference between the perceptions of the store prototype with a higher-level store design as compared to stores with a lower-level design.*

*Store aesthetic pleasure:* The presence, or absence, of beauty (Levy and Czepiel 1974) has been considered to lead to affective judgments (Dion, Berscheid and Walster 1972; Bloch 1995; Veryzer 1993). Cognition, emotion, and sensation promote aesthetic pleasure where aesthetic pleasure is variously considered as cognitive (e.g. Gestaltists, such as Arnheim 1974, 1977, 1988), and psycho-biological (Berlyne 1970, 1971, 1974) in origin. Consumers are unlikely to respond in simple and predictable ways to presentation of the aesthetic stimulus, and the complexity of the evaluations consumers' perform is underlined in the cognitive and affective processing of aesthetic and functional components (Veryzer 1995).

The unity-in-variety (Wohlwill 1980; Hekkert and Leder 2008, 2014a), or moderate incongruity (Mandler 1982), principles similarly hold whereas the greatest pleasure or beauty is experienced when as much variety or complexity is accommodated with a maximum amount of order. There are natural preferences for order and how various gestalt principles of

symmetry, good continuation, and pragnantz emphasise the laws of perceptual organisation that encourage preference for one unifying design over another (Hekkert and Leder 2008). Order, good proportion, balance, and harmony are among other principles that designers desire to communicate to make the stimulus appear pleasant (Lauer 1985; Alexander 1979).

When the formal principles of design which underpin perceptions of order (and are present in the prototype) are tested, Veryzer (1993) confirms that consumers prefer product designs that follow gestalt laws of proportion and unity over designs that violate these laws. In assessments of the attractiveness of product design, consumers' judgements were affected by visual attributes and configurations of visual attributes in the dimensions of a silhouette according to Eckman and Wagner (1994). Similarly, Jansson, Bointon and Marlow (2003) found in a study of aesthetic responses to point-of-purchase materials that three different design principles (proportion, focal point, and unity) had important yet varying effects upon people's perceptions of stimulus attraction. Simpler designs are often preferred, according to Frith and Nias (1974), where moderate complexity are most preferred. In a study of silhouette complexity and façade articulation on tall buildings, Heath, Smith and Lim (2000) found in an application of the environmental psychology framework that Berlyne's (1970, 1971, 1974) hypothesis and monotonic relationships were confirmed. Greater silhouette complexity was associated with higher preference, higher arousal, and greater pleasure.

In an examination of how stimulus repetition, figure ground contrast, figural goodness, prototypicality, and symmetry can influence aesthetic appreciation, Reber, Schwarz and Winkielman (2004) confirm how these formal design variables enable the dynamics of processing. A perceptual fluency is observed, and this fluency in itself encourages intrinsic preference. Exposure to these gestalt-like perceptual features encourage recognition speed and

evaluations and are influenced by variables such as exposure duration, exposure frequency, and perceptual priming (Bornstein 1989; Winkielman et al. 2006). Fluency increases liking, not because it is a property of the stimulus, but because it is a property of the processing dynamic of the perceiver (Hekkert and Leder 2008). Perceptions of novelty are based on the formal design employed and assume innate preferences for ordered presentations that also reference stored prototype schemas that are instantaneously retrieved, parsed, and compared for consistency.

Therefore, hypothesis number three proposes that consumers have a higher store aesthetic pleasure for the higher-level designed store than the lower-level designed store. This essentially means that store novelty is aesthetically preferred by the surveyed consumers as they frequently enjoy resolving the incompatibility to the prototype posed by the presence of novelty (Reber, Schwarz and Winkielman 2004). Consumers experience pleasure towards the environment if the store prototype is clearly perceptible even in the presence of introductions of novelty. Consequently, higher levels of store prototypically are aesthetically preferred, largely due to their familiarity and appropriate introductions of novelty (Reber, Schwarz and Winkielman 2004; Martindale 1984; Martindale and Moore 1988; Martindale, Moore and Borkum 1990).

*H<sub>3</sub>: There is a significant difference between the perceptions of store aesthetic pleasure in higher-level store designs as compared to stores with lower-level designs.*

The three hypotheses thus propose the measurement of store environmental stimuli (store novelty and store prototypicality) and consumer responses to those stimuli in the form of store aesthetic pleasure.

## **Methodology**

*Research design:* To investigate our conceptual model, we compared the higher and lower-levels of design of two stores of one fast-fashion retailer. The retailer in question employs three levels of store design, has about 300 stores in over 20 countries, and is currently spending significant resources expanding the company internationally. Understanding how the contribution of design-architecture of a new store results in better customer experiences and overall brand development across multiple geographies are among a number of important strategic questions facing the company. Most of the retailers' stores feature the lower-level three design, and relatively few stores employ the highest-level one design. More advanced audio-visual, multi-media, material selections, and visual merchandising sophistication, are among the features that differentiate the three levels of design (see Appendix for examples of images of the higher and lower levels of design).

The in-store survey method was employed to gather the data in the two stores. Locations were chosen after the checkout and sufficiently deep into the store to allow consumers to observe the design before responding to the survey questions. Both in-store survey administrations were comparable, and the prospective influence of situational variables was reduced in line with the approaches suggested by Spies, Hesse and Loesch (1997), Yoo, Park and MacInnis (1998), Mulhern and Padgett (1995), and Michon et al. (2007).

*Sampling plan:* The sampling plan involved a convenience sample of consumers, an approach consistent with the suggestions of Netemeyer, Bearden and Sharma (2003), Yu and Cooper (1983) and Bentler and Chou (1987), who point to the need for representative samples and the validity of personal interviews over other approaches, e.g. mail or online data collection. Upon the advice received from the retailer, the primary survey population (or target market)

identified for the survey administration was 18-35 year old females. Ninety-four percent of the 228 respondents in the Case 1 store are aged between 14-40 years, and 98% are female. Ninety-three percent of the 225 respondents in the Case 2 store are aged between 14-40 years, and 98% are female.

*Development of scales and fit measures:* Many of the extant efforts to develop scales to examine prototypicality, novelty, and especially aesthetic pleasure, involve ad-hoc item selections or items chosen simply based on their existence in extant literature (Blijlevens et al. 2014). This criticism of the general absence of empirical testing to determine reliability and validity also questions extant generalisability of findings to store environments contexts. It is consequently unclear from extant studies which items measure typicality and novelty and their effects on aesthetic pleasure given the inconsistent measurement approaches employed (Hekkert, Snelders and van Wieringen 2003; Blijlevens et al. 2014).

*Store prototypicality* has been conceptualised based on an extensive literature review along the lines proposed in Appendix 1. The item pools generated from reviews of the: design-architecture, consumer and environmental psychology, store environments, and aesthetics literatures reveal only one scale, the Ward, Bitner and Barnes (1992) scale for retail prototypicality. This scale was also supplemented by items drawn from the other literatures.

The conceptualisation and measurement of *store novelty* draws principally from the Cox and Cox (2002), Donovan and Rossiter (1982) scales from the aesthetics and environmental psychology literatures. The item pools generated and selected for store novelty explore the

perceptive basis for how the store environment proposes differentiation, newness/novelty, originality, and the unexpected.

In the examination of *store aesthetic pleasure*, it is proposed to complement its measurement with additional items drawn from retail marketing, architecture, and aesthetics for impressiveness (Nasar 2002; Sherman, Multhur and Smith 1997), and pleasantness (Kalcheva and Weitz 2006; Sherman, Multhur and Smith 1997; Jain and Srinivasan 1990).

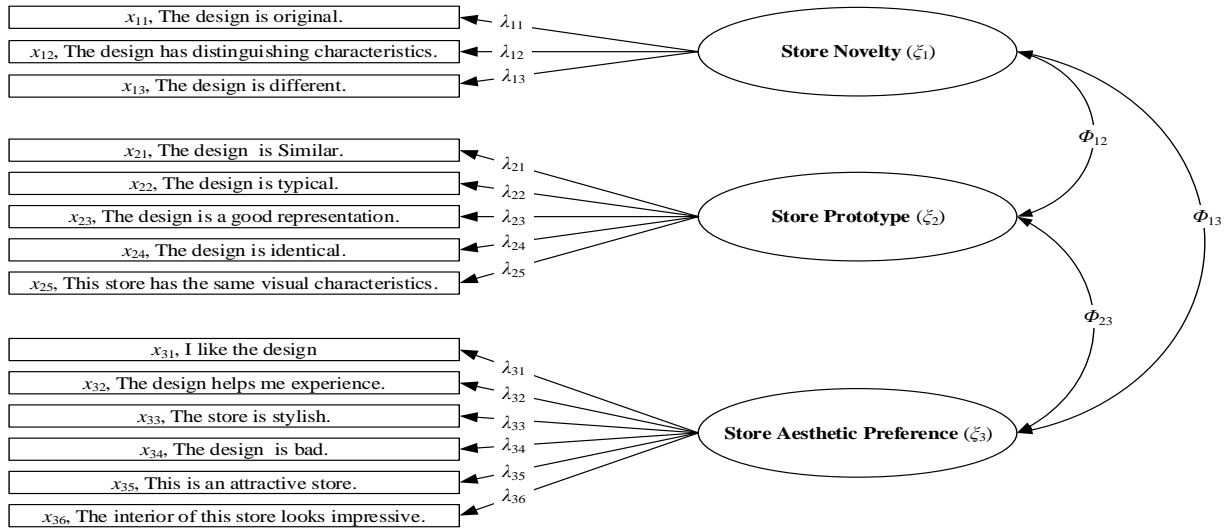
## **Results**

*Model estimation and fit measures:* Based on this interdisciplinary compilation of items behind the three scales, and the a-priori establishment of the link between the measurement items and the constructs, we applied a confirmatory factor analysis (CFA) to our baseline model (Kline 2011; see Figure 1). The main reason why we chose this analysis approach is that the constructs under investigation are of a reflective and latent nature (e.g., Hair et al., 2009), and the multiple items represent manifestations of the constructs (e.g., Jarvis et al. 2003).

Our analysis approach involved two steps. The first used the data sets of the two stores to test the baseline model, and determine the *measurement reliability and validity*, as well as the global fit of the model. The second, based on the suggestions of Brown (2006) and Byrne (2001), identified variances between the coefficients of the two models, and then investigate in-variances between the latent means structures of the two groups.



**Figure 1: Baseline Model**



Caption:  $x_n$ , items (the full wording can be seen from Table 2);  $\lambda_n$  factor loadings;  $\xi_n$ , latent construct;  $\Phi_n$ , intercorrelation between constructs;

The psychometric properties of the purified scales were assessed based on the recommendations of Churchill (1979) and Bagozzi and Yi (1988). The three constructs indicate a good internal consistency, with Cronbach's alphas ( $\alpha$ ) above 0.70 (Fornell and Larcker 1981). The constructs' composite reliability ( $\rho > 0.60$ ;  $AVE > 0.50$ ) achieve the recommended cut-off criteria (Fornell and Larcker 1981; Bagozzi and Yi 1988). With regard to the constructs' discriminant validity, the average variance extracted (AVE) is larger than the highest of the squared inter-correlations with the other factors in the measurement model (Fornell and Larcker 1981; see Table 1).

**Table 1: Discriminant validity measures**

Latent constructs	$\rho/\alpha$	$\xi_1$	$\xi_2$	$\eta_1$
<i>Store Novelty</i> ( $\xi_1$ )	.840/.887	(.637)		
<i>Store Prototype</i> ( $\xi_2$ )	.867/.888	.245	(.569)	
<i>Store Aesthetic Preference</i> ( $\xi_3$ )	.941/.939	.567	.008	(.727)

Caption:  $\rho$ , composite reliability;  $\alpha$ , Cronbach's alpha; average variance extracted values (AVE) are presented on the diagonal; squared correlation ( $\Phi_n$ ) matrix for latent constructs shown below the diagonal.

The testing of the global fit of our baseline model reveals that the indices measuring the absolute (Root Mean Square Error of Approximation (RMSEA) of 0.060, cut-off value <0.08), incremental (Tucker-Lewis Index (TLI), 0.916, and Comparative Fit Index (CFI), 0.932, cut-off value >0.9 for both), and parsimonious fit (normed  $\chi^2$  (CMIN/df), 2.447, cut-off value <3) meet the recommended thresholds; therefore, the empirical data fit the proposed model to a satisfactory degree (Anderson and Gerbing, 1988; Hu and Bentler 1998, 1999).

*Latent means comparison:* Before identifying differences between the latent means of the constructs and testing of our three hypotheses, it is advised to apply a multi-group-comparison test of the two measurement models (Brown 2006). The aim of this analysis is to determine significant differences (variances) between the single factor loadings of the two groups. By applying a  $\chi^2$  difference test between the baseline model (all parameters are allowed to vary freely across the two groups) and the constrained model (an equality constraint on every single factor loading is imposed) this test evaluates the null hypotheses that the constrained model is equal to the baseline model. Therefore, the differences of  $\chi^2$ -values ( $\Delta\chi^2$ ) of the two models are used to indicate the degree of in-variance between the factor loadings in the constrained and the baseline unconstrained models. As a result, only the factor loadings of the variables  $x_{23}$  ( $\Delta\chi^2$ , 4.526,  $\Delta df=1$ ,  $p<.5$ ) and  $y_{16}$  ( $\Delta\chi^2$ , 9.119 ( $\Delta df=1$ ,  $p<.001$ )) are variant and thus the null hypotheses cannot be accepted for these factor loadings (see Table 2). All the other loadings prove to be invariant (equal) across the two cases. To allow for further testing of invariances (=equality) of the structural effects between the two cases, we impose equality constraints on the factor loadings that are invariant.

**Table 2: Items and constructs**

<b>Construct/item</b>	$\lambda_{\text{case1}}$	$\lambda_{\text{case2}}$	$\Delta$
<b>Store Novelty (<math>\xi_1</math>)</b>			
$x_{11}$ , This design in this store is original compared to other ... stores.	.753	.650	-
$x_{12}$ , The design of this store has distinguishing characteristics compared to other ... stores.	.731	.664	-
$x_{13}$ , This design of this store is different compared to other ... stores.	.650	.743	-
<b>Store Prototype (<math>\xi_2</math>)</b>			
$x_{21}$ , The design of this store is typical of the designs of other ... stores.	.800	.778	-
$x_{22}$ , The design of this store is typical of the designs of other ... stores.	.848	.835	-
$x_{23}$ , The design of this store is a good representation of the design one sees in all ... stores.	.655	.813	$\Delta\chi^2, 4.526 (\Delta df=1, p<.5)$
$x_{24}$ , The design of this store is identical to other ... stores.	.746	.660	-
$x_{25}$ , This store has all the same visual characteristics found in other ... stores.	.676	.613	-
<b>Store Aesthetic Preference (<math>\eta_1</math>)</b>			
$y_{11}$ , I like the design of this store	.701	.811	-
$y_{12}$ , The design of this store helps me experience a pleasant time when I visit this store.	.752	.827	-
$y_{13}$ , This store is stylish.	.879	.858	-
$y_{14}$ , The design of this store is bad. <i>[reversed]</i>	.745	.775	-
$y_{15}$ , This is an attractive store.	.828	.877	-
$y_{16}$ , Is the interior of this store looks impressive.	.833	.805	$\Delta\chi^2, 9.119 (\Delta df=1, p<.001)$
Notes: All factor loadings significant on a .001 level; answers based on a 5point rating scale (anchors, 1, strongly disagree; 5, strongly agree); $\Delta$ , variance between factor loadings; -, $\Delta\chi^2 < 3.841 (\Delta df=1)$ , no significant difference;			

To complete this analysis, the higher-level designed store was chosen as the reference group and its latent means are fixed to zero (Byrne 2001). By comparing the mean structure of the reference group with the one of the other group, i.e. lower-level designed store group, we found that (1) both groups are different, and; (2) the latent mean values of the lower-level

designed store is higher/lower for store prototypicality, novelty, and aesthetic preference relative to our reference group.

The results evidence significant differences between all three constructs when the higher and lower-level stores are compared. Whereas the latent means of store novelty and aesthetic preference are lower in the lower-level store design group ( $\mu_{\xi_1}$ , -2.140;  $p < .0001$ ;  $\mu_{\xi_3}$ , -2.044,  $p < .0001$ ) the latent mean of store prototype is higher ( $\mu_{\xi_1}$ , .789;  $p < .0001$ ) for the lower-level design. Overall we can conclude that the perception of the store environment stimuli and response constructs across the two samples is different as expected and thus confirm all three hypotheses.

## **Discussion**

This is perhaps the first study to compare the different levels of design employed by the same retailer. In so doing, this research examines how the aesthetic content of the design of the store environment is considered by consumers. In measuring and examining the store prototype, store novelty, and store aesthetic pleasure constructs together for the first time this research thus contributes to a better understanding of the centrality of aesthetics in consumers' perceptions of the store environment.

The two store specification constructs (store prototypicality and store novelty) and one store response construct (store aesthetic pleasure) measure satisfactorily and confirm the reliability and validity of the constructs across different levels of design in the case of a fast-fashion retailer. Higher novelty and store aesthetic pleasure are perceived in the higher-level design. The opposite is found for the lower-level designed store. However, the store prototype the

retailer employs in its other stores is still evident and clearly perceptible even in the presence of novelty introductions in the higher-level designed store.

This research thus takes some initial steps into an examination of holistic processing (Keaveney and Hunt 1992; Martineau 1958; Ward, Bitner and Barnes 1992; Teller and Dennis 2012; McGoldrick 2002; Eroglu and Machleit 2008), and the distinction between emotional and cognitive (e.g. Bagozzi, Goinath and Nyer 1999; Charters 2006; Hirschman 1983; Arnheim 1974, 1977, 1988; Berlyne 1970, 1971, 1974) consumer processing of the store environment. The objective, formal attributes of the design, it would appear, are prospectively changed in consumers' perceptions in light of these introductions of novelty and reflect consumers attribute-level discriminations. Continued introductions of novelty are likely to change perceptions of the shared attribute set that identify the globally defined prototype. Thus, the introductions of novelty at the attribute and objective-level possibly weaken perceptions of the store prototype. At the global-attribute level of processing, it also means that consumers are also found to identify the presence or absence of store novelty and store aesthetic pleasure in both stores.

The findings thus also make some small steps in overcoming some limitations in the categorisation inspired store environments literature of Bitner (1992) and limited operationalisation of the Berlyne collative-motivational models in retail contexts (e.g. Donovan and Rossiter 1982; Donovan et al. 1994; Gilboa and Rafaeli 2003; Tai and Fung 1997) where few ecological or subjective interpretations in process-suggestive models examine consumer perceptions of the store environment.

### **Contributions, limitations and suggestions for further research**

The measurement and associations of the constructs perform as expected in this research where, for example, the lower-level designed store is perceived as less novel and gives rise to lower levels of aesthetic pleasure. Thus, the findings confirm the reliability, validity, and versatility of the store prototypicality, novelty, and aesthetic pleasure constructs in examinations of consumer perceptions of different levels of design.

The main practical contribution of our research is to aid managers in examining consumer perceptions of design-architecture. It is currently difficult to compare consumer perceptions of, for example, a Prada epicentre or an Abercrombie & Fitch store. Managers have consequently few tools available to them to assess the investment impact of higher-level and lower-level designs across different stores in the same retailer or across different stores across different retailers.

This empirical study focuses on two fast-fashion stores. Future research could look into other retail and service sectors, such as the grocery, consumer electronics, banking or the hospitality sectors. This research makes some small contributions to better understanding the categorisation processing of store environments. Future research could increasingly focus on the kinds of categorical-motivational research (Whitfield and Slatter 1979; Whitfield 1983; Whitfield 2000; Whitfield 2009) that reveals the kinds of perceptual processing consumers employ in their perceptions of the aesthetic content of the store environment. For example, Bloch (1995) assumes that both holistic and atomistic processing occur simultaneously. Categorisation reconciliations with repeated exposures to the stimulus reveal perceptions of design concepts that typically change with repeated exposure. Martindale (1990) similarly

discusses how habituation exerts an influence over how creative people respond to novelty, arousal potential, and meaningfulness. Habituation may not merely be the polar opposite of the need for novelty, and avoiding boredom may not be the equivalent of a desire for novelty. Aesthetically appreciative people may or may not prefer novelty and evidence slower habituation effects than others. Future research could reveal if persons with slower habituation effects and an interest in design may demand greater injections of novelty with accompanying implications for arousal thresholds.

## References

- Aaker, D (1991) *Managing Brand Equity*, The Free Press, New York.
- Alexander, C (1979) *A Timeless Way of Building*, Oxford University Press, London.
- Anderson, J and Gerbing, D (1988) Structural Equation Modeling in Practice: a Review and Recommended Two-Step Approach. *Psychological Bulletin*, 103(3), 411-23.
- Arnheim, R (1974) *Art and Visual Perception: A Psychology of the Creative Eye*, University of California Press, California.
- Arnheim, R (1977) *The Dynamics of Architectural Form*, 2nd Paperback Printing 2009 ed, University of California Press, London.
- Arnheim, R (1988) Visual Dynamics. *American Scientist*, 6, 585-91.
- Bagozzi, R, Gopinath, M and Nyer, P (1999) The Role of Emotions in Marketing. *Journal of the Academy of Marketing Science*, 27(2), 184-206.
- Bagozzi, R and Yi, Y (1988) On the Evaluation of Structural Equations Modeling. *Journal of the Academy of Marketing Science*, 16(1).
- Baker, J, Berry, L and Parasuraman, A (1988) The Marketing Impact of Branch Facility Design. *Journal of Retail Banking*, 10(2).

- Baker, J, Parasuraman, A, Grewal, D and Voss, G (2002) The Influence of Multiple Store Environment Cues on Perceived Merchandise Value and Patronage Intentions. *Journal of Marketing*, 66(April), 120-41.
- Bentler, P and Chou, C (1987) Practical Issues in Structural Modeling. *Sociological Research & Methods*, 16(1), 78-117.
- Berlyne, D (1970) Novelty, Complexity & Hedonic Value. *Attention, Perception and Psychophysics*, 8(5), 279-86.
- Berlyne, D (1971) *Aesthetics & Psychobiology*, Appleton-Meredith Corporation, New York.
- Berlyne, D (1974) *Studies in the New Experimental Aesthetics: Steps toward an Objective Psychology of Aesthetic Appreciation*, John Wiley & Sons, New York.
- Biederman, I and Vessel, E (2006) Perceptual Pleasure and the Brain. *American Scientist*, 94(May-June).
- Bitner, M (1992) Servicescapes: The Impact of Physical Surroundings on Customers and Employees. *Journal of Marketing*, 56(April), 57-71.
- Blijlevens, J et al. (2014). The Development of a Reliable and Valid Scale to Measure Aesthetic Pleasure in Design, *International Association of Empirical Aesthetics*. New York.
- Bloch, P (1995) Seeking the Ideal Form: Product Design and Consumer Response. *Journal of Marketing*, 59(July), 16-29.
- Bornstein, R (1989) Exposure and Affect: Overview and Meta-Analysis of Research, 1968-1987. *Psychological Bulletin*, 106(2), 265-89.
- Brown, T (2006) *Confirmatory Factor Analysis for Applied Research*, Guilford Press, London.
- Byrne, B (2001) *Structural Equation Modeling with Amos - Basic Concepts, Applications, and Programming*, Routledge, London.



- Charters, S (2006) Aesthetic Products and Aesthetic Consumption: A Review. *Consumption, Markets and Culture*, 9(3), 235-55.
- Churchill, G (1979) A Paradigm for Developing Better Measures of Marketing Constructs. *Journal of Marketing Research*, 26(February), 64-73.
- Cox, D and Cox, A (2002) Beyond First Impressions: The Effects of Repeated Exposure on Consumer Liking of Visually Complex and Simple Product Designs *Journal of the Academy of Marketing Science*, 30(2), 119-30.
- Dagger, T and Danaher, P. (2014) Comparing the Effect of Store Remodeling on New and Existing Customers. *Journal of Marketing*, 78, 62-80.
- Dion, K, Berscheid, E and Walster, E (1972) What Is Beautiful Is Good. *Journal of Personality and Social Psychology*, 24(3), 285-90.
- Donovan, R et al. (1994) Store Atmosphere and Purchasing Behaviour. *Journal of Retailing*, 70(3).
- Donovan, R and Rossiter, J (1982) Store Atmosphere: An Environmental Psychology Approach. *Journal of Retailing*, 58(1).
- Eckman, M and Wagner, J (1994) Assessing the Attractiveness of Product Design: The Effect of Visual Attributes and Consumer Characteristics. *Advances in Consumer Research*, 21.
- Eroglu, S and Machleit, K (2008). Theory in Consumer-Environment Research: Diagnosis and Prognosis In Haugtvedt, C, Herr, P and Kardes, F (Eds) *Handbook of Consumer Psychology*, Psychology Press, New York.
- Fornell, C and Larcker, D (1981) Evaluating Structural Equations Models with Unobserved Variables and Measurement Error. *Journal of Marketing Research*, 18(1), 39-50.
- Frith, C and Nias, D (1974) What Determines Aesthetic Preferences? *The Journal of General Psychology*, 91, 163-73.

- Gilboa, S and Rafaeli, A (2003) Store Environment, Emotions and Approach Behaviour: Applying Environmental Aesthetics to Retailing. *International Review of Retail, Distribution and Consumer Research*, 13(2), 195-211.
- Hagtvedt, H Patrick, V. (2014) Consumer Response to Overstyling; Balancing Aesthetics and Functionality in Product Design. *Psychology and Marketing*, 31(7), 518-25.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2009). *Multivariate Data Analysis*, Upper Saddle River, New Jersey: Prentice Hall
- Heath, T, Smith, S and Lim, B (2000) Tall Buildings and the Urban Skyline: The Effect of Visual Complexity on Preferences. *Environment and Behaviour*, 32.
- Hekkert, P (2014a). Aesthetic Responses to Design: A Battle of Impulses In Tinio, P S, J. (Ed) *The Cambridge Handbook of the Psychology of Aesthetics and the Arts*, Cambridge University Press, Cambridge.
- Hekkert, P. (2014b). What I Talk About When I Talk About Aesthetics, *International Association of Empirical Aesthetics*. New York.
- Hekkert, P (2006) Design Aesthetics: Principles of Pleasure in Design. *Psychology Science*, 48(2), 157-72.
- Hekkert, P and Leder, H (2008). Product Aesthetics In Schifferstein, H and Hekkert, P (Eds) *Product Experience*, Elsevier, London & Amsterdam.
- Hekkert, P, Snelders, D and van Wieringen, P (2003) Most Advanced, yet Acceptable: Typicality and Novelty as Joint Predictors of Aesthetic Preference in Industrial Design. *British Journal of Psychology*, 94, 111-24.
- Hightower, R, Brady, M and Baker, T (2002) Investigating the Role of the Physical Environment in Hedonic Service Consumption: An Exploratory Study of Sporting Events. *Journal of Business Research*, 55, 697-707.

- Hirschman, E (1980) Innovativeness, Novelty Seeking, and Consumer Creativity. *Journal of Consumer Research*, 7(December).
- Hirschman, E. (1983) Aesthetics, ideologies and the Limits of the Marketing Concept. *Journal of Marketing*, 47 (Summer), 45-55.
- Hirschman, E and Holbrook, M (1982) Hedonic Consumption: Emerging Concepts, Methods and Propositions. *Journal of Marketing*, 46(Summer), 92-101.
- Holbrook, M (1980) Some Preliminary Notes on Research in Consumer Esthetics. *Advances in Consumer Research*.
- Homburg, C Schwemmler, M. and Kuehnl, C. (2015) New Product Design: Concept, Measurement, and Consequences. *Journal of Marketing*, 79, 41-56.
- Hu, L and Bentler, P (1998) Fit Indices in Covariance Structure Modeling: Sensitivity to underparameterized Model Misspecification. *Psychological Methods*, 3(4), 424-53.
- Hu, L and Bentler, P (1999) Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus New Alternatives. *Structural Equations Modelling: a multidisciplinary journal*, 6(1), 1-55.
- Jain, K and Srinivasan, N (1990) An Empirical Assessment of Multiple Operationalizations of Involvement. *Advances in Consumer Research*, 594-602.
- Jansson, C, Bointon, B and Marlow, N (2003) An Exploratory Conjoint Analysis Study of Consumers' Aesthetic Responses of Point-of-Purchase Materials. *The International Review of Retail, Distribution and Consumer Research*, 13(1), 59-76.
- Jarvis, C. B., S. B. Mackenzie, P. M. Podsakoff, D. G. Mick, and W. O. Bearden. (2003). "A critical review of construct indicators and measurement model misspecification in marketing and consumer research." *Journal of Consumer Research* 30 (2): 199-218.

- Johnson, K et al. (2015) Keeping Customers Shopping in Stores: Interrelationships among Store Attributes, Shopping Enjoyment, and Place Attachment. *The International Review of Retail, Distribution and Consumer Research*, 25(1), 20-34.
- Kaltcheva, V and Weitz, B (2006) When Should a Retailer Create an Exciting Store Environment? *Journal of Marketing*, 70(January), 107-18.
- Kaplan, S (1983) A Model of Person-Environment Compatibility. *Environment and Behaviour*, 15(3), 311-32.
- Kaplan, S (1987) Aesthetics, Affect, and Cognition: Environmental Preference from an Evolutionary Perspective. *Environment and Behaviour*, 19(1), 3-32.
- Keaveney, S and Hunt, K (1992) Conceptualisation and Operationalisation of Retail Store Image: a Case of Rival Middle-Level Theories. *Journal of the Academy of Marketing Science*, 20(2), 165-75.
- Keller, K (1993) Conceptualising, Measuring, and Managing Customer-Based Brand Equity. *Journal of Marketing*, 57(January), 1-22.
- Kline, R (2011). Assumptions in Structural Equations Modeling In Hoyle, R (Ed) *Handbook of Structural Equations Modeling*.
- Klingmann, A (2008) *Brandscapes: Architecture in the Experience Economy*, MIT Press, Cambridge.
- Kopec, D (2006) *Environmental Psychology for Design*, Fairchild Publications, New York.
- Lauer, D (1985) *Design Basics*, Holt, New York.
- Levy, S and Czepiel, J. (1974). Marketing and Aesthetics, 1974 *Combined Proceedings of the American Marketing Association* (pp. 386-91). Chicago: American Marketing Association.
- Mandler, J (1982). The Structure of Value: Accounting for Taste In Margaret, H, Clarke, S and Fiske, S T (Eds) *Affect and Cognition: The 17th Annual Carnegie Symposium on Cognition*, Lawrence Erlbaum, Hillsdale.

- Martindale, C (1984) The Pleasures of Thought: A Theory of Cognitive Hedonics. *The Journal of Mind and Behaviour*, 5(1), 49-80.
- Martindale, C (1990) *The Clockwork Muse: The Predictability of Artistic Change*, Basic Books - Harper Collins, New York.
- Martindale, C and Moore, K (1988) Priming, Prototypicality, and Preference. *Journal of Experimental Psychology: Human Perception and Performance*, 14(4), 661-70.
- Martindale, C, Moore, K and Borkum, J (1990) Aesthetic Preference: Anomalous Findings for Berlyne's Psychobiological Theory. *The American Journal of Psychology*, 103(1), 53-80.
- Martineau, P (1958) Sharper Focus for the Corporate Image. *Harvard Business Review*, 36(1).
- McGoldrick, P (2002) *Retail Marketing*, McGraw-Hill, London.
- McGoldrick, P and Pieros, C (1998) Atmospheric, Pleasure and Arousal: The Influence of Response Moderators. *Journal of Marketing Management*, 14, 173-97.
- Mehrabian, A and Russell, J (1974) *An Approach to Environmental Psychology*, MIT Press, Cambridge.
- Michon, R et al. (2007) The Shopping Experience of Female Fashion Leaders. *International Journal of Retail & Distribution Management*, 35(6), 488-501.
- Miniero, G Rurale, A. and Addis, M. (2014) Effects of Arousal, Dominance, and Their Interaction on Pleasure in a Cultural Environment. *Psychology and Marketing*, 31(8), 628-34.
- Mulhern, F and Padgett, D (1995) The Relationship between Retail Price Promotions and Regular Price Promotions. *Journal of Marketing*, 59(October), 83-90.
- Nasar, J (1994) Urban Design Aesthetics: The Evaluative Qualities of Building Exteriors. *Environment and Behaviour*, 26.

- Nasar, J (2002) What Design for a Presidential Library? Complexity, Typicality, Order and Historical Significance. *Empirical Studies of the Arts*, 19(1).
- Netemeyer, R, Bearden, W and Sharma, S (2003) *Scaling Procedures: Issues and Applications*, SAGE, New York.
- Rafaeli, A and Vilnai-Yavetz, I (2004) Instrumentality, Aesthetics and Symbolism of Physical Artifacts as Triggers of Emotion. *Theoretical Issues in Ergonomic Science*, 5(1), 91-112.
- Reber, R, Schwarz, N and Winkielman, P (2004) Processing Fluency and Aesthetic Pleasure: Is Beauty in the Perceiver's Processing Experience. *Personality and Social Psychology Review*, 8(4), 364-82.
- Saegert, S and Winkel, G (1990) Environmental Psychology. *Annual Review of Psychology*, 41, 441-77.
- Sherman, E, Multhur, A and Smith, R (1997) Store Environment and Consumer Purchase Behavior: Mediating Role of Consumer Emotions. *Psychology & Marketing*, 14(4), 361-78.
- Spies, K, Hesse, F and Loesch, K (1997) Store Atmosphere, Mood and Purchasing Behaviour. *International Journal of Research in Marketing*, 14, 1-17.
- Tai, S and Fung, A (1997) Application of an Environmental Psychology Model to in-Store Buying Behaviour. *The International Review of Retail, Distribution and Consumer Research*, 7(4).
- Teller, C and Dennis, C (2012) The Effect of Ambient Scent on Consumers' Perception, Emotions and Behaviour – a Critical Review. *Journal of Marketing Management*, 28(1/2), 14-36.
- Thurgood, C Hekkert, P and Blijlevens, J (2014). The Joint Effect of Typicality and Novelty on Aesthetic Pleasure for Product Designs: influences of Safety and Risk, *International Association of Empirical Aesthetics*. New York.

- van Kenhove, P and Desrumaux, P (1997) The Relationship between Emotional States and Approach and Avoidance Responses in a Retail Environment. *The International Review of Retail, Distribution and Consumer Research*, 7(4).
- Venkatesh, A and Meamber, L (2008) The Aesthetics of Consumption and the Consumer as an Aesthetic Subject. *Consumption Markets & Culture*, 11(1), 45-70.
- Venkatraman, M and MacInnis, D (1985) The Epistemic and Sensory Exploratory Behaviors of Hedonic and Cognitive Shoppers. *Advances in Consumer Research*, 12, 102-7.
- Veryzer, R (1993) Aesthetic Response and the Influence of Design Principles on Product Preferences. *Advances in Consumer Research*, 20.
- Veryzer, R. (1995) Product Design, Aesthetics and Consumer Research. *Advances in Consumer Research*, 22.
- Veryzer, R and Hutchinson, J (1998) The Influence of Unity and Prototypicality on Aesthetic Response to New Product Designs. *Journal of Consumer Research*, 24, 374-94.
- Vilnal-Yavetz, I and Koren, R. (2013) Cutting through the Clutter: Purchase Intentions as a Function of Packaging Instrumentality, Aesthetics and Symbolism. *The International Review of Retail, Distribution and Consumer Research*, 23(4), 394-417.
- Wakefield, K L and Blodgett, J G (1994) The Importance of Servicescapes in Leisure Service Settings. *Journal of Services Marketing*, 8(3).
- Wakefield, K L and Blodgett, J G (1996) The Effect of the Servicescape on Customers' Behavioural Intentions in Leisure Service Settings. *The Journal of Service Marketing*, 10(6), 45-61.
- Walsh, G et al. (2011) Emotions, Store-Environmental Cues, Store-Choice Criteria, and Marketing Outcomes. *Journal of Business Research*, 64, 737-44.
- Ward, J, Bitner, M and Barnes, J (1992) Prototypicality and Meaning of Retail Environments. *Journal of Retailing*, 68(2).

- Whitfield, T (1983) Predicting Preference for Familiar, Everyday Objects: An Experimental Confrontation between Two Theories of Aesthetic Behaviour. *Journal of Environmental Psychology*, 3(3), 221-37.
- Whitfield, T (2000) Beyond Prototypicality: Toward a Categorical-Motivation Model of Aesthetics. *Empirical Studies of the Arts*, 18(1), 1-11.
- Whitfield, T (2009) Theory Confrontation: Testing the Categorical-Motivation Model. *Empirical Studies of the Arts*, 27(1), 43-59.
- Whitfield, T and Slatter, P (1979) The Effects of Categorisation and Prototypicality on Aesthetic Choice in a Furniture Selection Task. *British Journal of Psychology*, 70, 65-75.
- Winkielman, P. et al. (2006) Prototypes Are Attractive Because They Are Easy on the Mind. *Psychological Science*, 17(9).
- Wohlwill, J (1980) The Place of Order and Uncertainty in Art and Environmental Aesthetics. *Motivation and Emotion*, 4(2).
- Yoo, C, Park, J and MacInnis, D (1998) Effects of Store Characteristics and in-Store Emotional Experiences on Store Attitude. *Journal of Business Research*, 42, 253-63.
- Yu, J and Cooper, H (1983) A Quantitative Review of Research Design Effects on Response Rates to Questionnaires. *Journal of Marketing Research*, 20, 36-44.



## Appendix 1 - Construct/Items

### **Store Prototype**

1. The design of this store is typical of the designs of other ... stores.
2. The design of this store is typical of the designs of other ... stores.
4. The design of this store is a good representation of the design one sees in all ... stores.
5. The design of this store is identical to other ... stores.
6. This store has all the same visual characteristics found in other ... stores.

### **Store Novelty**

1. This design in this store is original compared to other ... stores.
2. The design of this store has distinguishing characteristics compared to other ... stores.
3. This design of this store is novel and fresh compared to other ... stores.
4. This design of this store is different compared to other ... stores.
5. This design of this store has innovative changes compared to other ... stores.
6. This design of this store has a different level of design compared to other ... stores.

### **Store Aesthetic Pleasure**

1. I like the design of this store
2. The design of this store helps me experience a pleasant time when I visit this store.
3. This store is stylish.
4. This is an attractive store.
5. Is the interior of this store looks impressive.
6. This store has the best design of any ... store I have seen.

*(5 point rating scale; anchors, 1, strongly agree; 5, strongly disagree)*