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**The reinforcing and aversive consequences of customer experience.  
The role of consumer confusion**

**ABSTRACT**

This study aims to provide insights on the concept of customer experience, its effect on consumer behavior and the role of previous experiences. It uses a behavioral framework and measures the reinforcing and aversive experiential influences on (approach and avoidance) behavior. The study involved 260 participants from an online research panel. The descriptions of two retail situations were used, chosen to differ in terms of levels of previous experience/ learning history. The results indicate that confusion, as aversive consequence of retail situations, acts along with functional and social reinforcement to determine behavior. The study further explains and proves the role of accumulated previous encounters on determining the reinforcing and aversive elements of experience. The implications for theory and marketing management are discussed.

**Keywords:** Customer experience, retail situation, consumer confusion, aversive consequences, PAD.

**Article Classification:** Research paper

**Declarations of interest:** None

## **1. Introduction**

Improving customer experience and understanding shoppers' in store behavior in the retail market have been described as 'crucial', as 85.4% of all retail sales are still generated through brick and mortar stores (Office for National Statistics, 2017). McKinsey&Company (2016) has identified that past and present pleasurable and painful experiences heavily influence customer interactions and in store approach and avoidance behavior. For example, unclarity in retail markets (too many or too similar offerings), which can be the outcome of assortment management for example, has caused retail analysts to claim that "navigating through three or four bays of air fresheners is painful" (Wood and Butler, 2015). Consumer confusion is indeed perceived as a pressing issue for retailers due to the adverse effect on consumers' switching behavior, decreased time spent in store and sales to name a few (Jeffries, 2015; Schmidt, 2016; Webber, 2017). Overall, IBM's customer experience index indicates that 40% of retail brands are discovered to be lagging behind when it comes to customer experience (Glass and Haller, 2017).

The primary cause of this might be related to a lack of understanding on the type of experiential reinforcement and aversive consequences deriving from retail interactions and the effect of repeated exposure to markets (previous experiences) on experiential evaluations (McKinsey&Company, 2016; Lemon and Verhoef, 2016). Therefore, an understanding of the retail shopping experience is imperative. Especially areas like experientially-determined reinforcement and adverse influences, their effect on behavior and the role of previous retail exposure are crucial to assist with the best allocation of retail resources to enhance approach and decrease avoidance behavior.

Current research on customer experience has been marked by great progress but offers little guidance on the aforementioned areas. One of the approaches used to define consumers'

experiential state is through the Pleasure, Arousal and Dominance (PAD) model (Rose *et al.*, 2012). However, more insights on variables that can increase the predictive ability of the PAD model on behavior are required (Eroglu *et al.*, 2001; 2003; Masara *et al.*, 2010) and equally, authors have suggested that understanding what motivates behavior (Helkkula *et al.*, 2012) is one big challenge with the customer experience stream of research. Most relevant studies have been performed on the positive drivers of in store behavior (Bagdare and Jain, 2013) and less is known on the negative consequences (Verhoef *et al.*, 2009; Brakus *et al.*, 2009), such as confusion. Therefore, more knowledge is essential on the aversive elements of customer retail experience and their effect on behavior.

Furthermore, there is a relative scarcity of knowledge on the role of past experiences on evaluations of the customers' current experience (Helkkula *et al.*, 2012; Lemon and Verhoef, 2016). For example, existing models of consumer confusion (Mitchell *et al.*, 2005) have suggested that learning or market experience (past experience) are moderators of the relationship between the environment and the state of confusion (current experience) or can act as antecedents to the state (Mitchell *et al.*, 2005; Lu *et al.*, 2016). Using retail practices like the use of standard words on labels, price per serving or vertical merchandising for easier comparisons (Grocery Manufacturers' Association, 2017; Shankar *et al.*, 2011; Mitchell and Giles, 2010) aim precisely to increase the sense of consistency and comprehension over time and reduce confusion (Canning, 2016). However, research on learning history in customer experience or confusion allows for further exploration on this matter. Overall, this study contributes to the emerging but limited body of research on customer experience and consumer confusion by addressing three critical issues.

Firstly, we draw on principles of behavioral psychology to provide a development on our understanding of customer experience. Theoretically, we offer insights on customer experience

research by providing a conceptualisation of experience related reinforcers and aversive consequences based on the behavioral perspective model (BPM) and the application of the Mehrabian and Russell (1974) PAD model. The PAD dimensions are conceptualised as part of the customer retail experience measuring the functional and social reinforcement and flexibility (openness-closedness). We further conceptualise confusion as an aversive consequence of a retail situation. Practically, retailers are better able to understand the dimensions of customer retail experience.

Secondly, we investigate what influences consumer behavior in retail situations. We specify not only how to boost positive but also how to reduce negative in store behavior. Theoretically, we offer new insights on the widely used Mehrabian and Russell (1974) PAD model through a theoretically sound background for the addition of confusion as an aversive consequence of customer retail experiences (Anninou *et al.*, 2015). This differentiates this study from previous attempts, by conceptualising confusion as a main component of the PAD rather than an antecedent of emotions (e.g. Schweizer, 2004). In practice, we offer retailers a tool to measure what reinforces or hinders behavior and help them to improve retail performance.

Finally, past experiences have been described as strong determinants of both the evaluations of the overall current customer experience (Lemon and Verhoef, 2016) and the levels of confusion (Mitchell *et al.*, 2005; Lu *et al.*, 2016). Based thereon, the study provides evidence for the role of aggregate consumer market learning on the levels of reinforcement and aversive consequences received. Two market situations—grocery and high technology buying—have been tested. The study advances theoretical arguments by offering new insight on the influence of past experiences on current experience formation (Lemon and Verhoef, 2016). Managerially, as consumers are found to require more decision assistance in unfamiliar and

more excitement in mundane markets, we assist retailers to place their resources depending on the characteristics of the market.

The findings prove the effect of the reinforcing and punishing elements of customer experience on approach and avoidance behavior. To initiate this investigation, the study provides an overview of customer experience, the BPM, the PAD, and confusion literature, and outlines the conceptual model.

## **2. Theoretical background**

### *2.1 Customer experience and the Behavioral Perspective Model*

Customer experience has been mentioned, discussed and theorised by scholars and practitioners, mostly in the past three decades. Although identified as strongly related to established marketing constructs like satisfaction, service quality and trust, recent conceptualisations describe customer experience as a broader construct (Lemon and Verhoef, 2016). Customer experience is composed of sensory, cognitive/intellectual, affective, social, and physical dimensions and is influenced by previous experiences (Brakus *et al.*, 2009; Keiningham *et al.*, 2017). Among other concepts, experiential value in the context of retailing has received some limited attention by researchers (Helkkula *et al.*, 2012). This research stream provides some indication of the way consumers are motivated to act.

However, following recent appeals from McKinsey and Company (2016, p. 38) around the value of applying principles of behavioral psychology to explain customer experience, we suggest an approach based on a valid framework of reinforcers and aversive consequences of retail experiences that can guide retailers' decision-making. Specifically, the behavioral perspective model (BPM) places distinctive emphasis on the environment and the consumer situation which is perceived as the main framework within which behavior is determined

(Foxall, 2013). According to the BPM, consumer behavior is predictable from three dimensions of situational influence:

- (1) the two, distinct concepts of functional and social reinforcement<sup>1</sup> signalled by the situation (informed by the consumers' learning history);
- (2) the consumer behavior setting scope (openness or closedness); and
- (3) the aversive consequences of being in a situation (informed by the consumers' learning history).

Specifically, the functional reinforcement signalled by consumption situations is defined as the functional and emotional benefits of consumption. Functional reinforcement consists of the benefits and satisfaction contingent in a situation (e.g. being on a holiday provides more functional reinforcement than shopping at a grocery store). Social reinforcement indicates the symbolic benefits like social status, self-esteem, pride, and honour (status/ social-related) and it acts as feedback on how well someone performs (being on a holiday provides better indication of ones progress in life compared to shopping at a grocery store). The consumer behavior setting scope (openness/ closedness) is an indication of situational flexibility. Relatively open settings like being at a party are marked by an absence of physical, social, and verbal pressures to conform to requirements or constraints imposed by others. Closed settings (like being in a library or church) impose more constraints. Accordingly, consumers are expected to feel more controlling, influential, and important in an open rather than a closed setting and are more likely to act positively (Yani-de-Soriano and Foxall, 2006). Regarding the behavioral measures,

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<sup>1</sup> Throughout this article new terminology has been used in place of the original utilitarian and informational reinforcement (see all literature of BPM until now). Specifically, since "utilitarian reinforcement" consists of emotional benefits– it has been relabelled to "Functional Reinforcement". Since "informational reinforcement" is about the social benefits of being in a setting– it has been relabelled as "Social Reinforcement". The use of this new terminology has been made for ease of exposition and comprehension but doesn't change the reinforcing value implied by the two reinforcements.

approach behavior is expected to increase with the total quantity and quality of reinforcement (functional or social), while avoidance is expected to occur in lower levels of reinforcement. The aversive consequences are the unpleasant implications of being in a situation, which reduce the possibility of a behavior recurring in the future. According to this stream of research, the behaviors performed in situations depend on the level of reinforcement or aversive consequences received in the past but also the openness or closedness of a setting.

The consumer situation encompasses a learning history (past experience) which impacts the two reinforcers and aversive consequences and subsequently the probability that particular consumer behaviors will occur again. We define the retail situation as the interaction between the discriminative stimuli that comprise the behavior setting scope during a retail encounter and the individual's history of reinforcement and aversive consequences in similar settings (accumulation of previous retail experiences). The consumer situation locates consumer behavior in space and time. The learning history is associated with the occurrence of previous reinforcements *and* aversive consequences (Foxall, 1992; Foxall and Yani-de-Soriano, 2005). Until this study, significant aspects of the BPM remain unexamined. The aversive consequences although expected to have an effect on behavior have not been incorporated in previous attempts to conceptualise and measure the model. So far, the effect of aversive consequences has primarily been examined as the effect of monetary cost (Sigurdsson *et al.*, 2010), with other aversive consequences remaining unexplored.

The concept of holistic experience is said to describe an overall appreciation of unique experiences crafted through interactions with a retailer across different touchpoints over time (Grewal *et al.*, 2009; Lemke *et al.*, 2011). This is achieved through consumers' dynamic contacts (prior experiences influence future experiences) with the different touchpoints and environmental components, such as design elements, service interphase and store brands along



with other dimensions that are not strictly under an organization control, such as the social environment (Verhoef *et al.*, 2009). We suggest that the components of the BPM provide a sufficient and vibrant depiction of several aspects relating to the concept of holistic experience. Specifically, the holistic appreciation of all of the experiential elements (e.g. design, sensory, service dimensions) can be perceived as providing diverse levels of benefits translated to functional reinforcement; the social dimension (e.g. clientele, crowding or value placed by society on some purchases) provide social reinforcement; aspects like the flexibility offered through for example promotions or environmental arrangements provide an appreciation of openness or closedness of an experience. Other arrangements (e.g. cost, merchandise or brand arrangement) might act to form aversive consequences. Finally, the notion of learning history, is the connecting concept behind the suggestion that continuous interactions with a retailer have an effect on the overall appreciation of customer experience and can explain the mechanism that helps form the holistic experience over time.

## *2.2 Conceptualising the components of customer experience*

Mehrabian and Russell (1974) introduced a model of environmental psychology that employs measures of three variables—pleasure, arousal, and dominance—to describe and measure individuals’ affective responses to an environment. Based on the PAD theory, the aforementioned emotional responses are believed to mediate the effect of an environment on overt approach or avoidance consumer behaviors like being in a situation, relating to others, staying in/escaping a situation, and spending time. The PAD model has found application before in explaining the “affective experiential state” of consumers (Rose *et al.*, 2012). From this perspective the dimensions of the model measure the affective state of consumers when being part of an experience.

One of the main strengths of the PAD approach, as noted by Lutz and Kakkar (1975), is that its implementation not only allows the descriptions of distinct conditions, but also facilitates the comparison of different situations. Since all situations can be described based on the levels of pleasure, arousal, dominance, and the approach-avoidance behaviors that they elicit in individuals, a comparison of diverse situations is feasible based on the analysis of the relevant scores. In this sense, it is easy to examine situational differences based on either the personal (groups of consumers with similar characteristics) or the aggregate (the summative scores produced for the situation) level, and reach interesting conclusions about their qualities.

Notwithstanding these strengths, the application of the PAD model has furnished somewhat ambiguous results (Massara *et al.*, 2010), even from earlier attempts. Lutz and Kakkar (1975) did not find imposing results regarding the significance of situational effects on consumer behavior and argued for the inclusion of “other variables” — possibly cognitive in nature— which can potentially improve the relationship between emotional reactions and behavior so that the situational approach does not remain isolated from other influences. A summary of the identified variables is presented in table 1.

*Table 1. Studies using some form of the Mehrabian and Russell approach*

<b>Study</b>	<b>Setting</b>	<b>Variables</b>
Babin and Darden (1995)	Retail environments	PAD
Eroglu <i>et al.</i> (2001)	Online setting	PAD
Mattila and Wirtz (2001)	Retail outlet	Pleasure and Arousal
Chebat and Michon (2003)	Shopping mall	Pleasure and Arousal
Davis <i>et al.</i> (2008)	Fictional online retailer	Pleasure and Arousal
Lee <i>et al.</i> (2008)	Festivals	Positive/Negative emotions/Satisfaction
Kim and Moon (2009)	Retail environments	Pleasure and Perceived service quality
Jang and Namkung (2009)	Restaurants	Positive and Negative emotions
Penz and Hogg (2011)	Any online or offline retail setting	PAD+ Enjoyment+ Return/Explore+ Emotional ambivalence

Morrison, <i>et al.</i> (2011)	Retail store in a prime shopping district	Pleasure and Arousal
Chang <i>et al.</i> (2011)	Retail store offering outdoor merchandise	Positive emotional responses (excitement, enthusiastic, fun, happy, interested, inspired, joyful)
Walsh <i>et al.</i> (2011)	Coffee shops	Pleasure and Arousal
Mazaheri <i>et al.</i> (2014)	Online setting	PAD
Richard and Chebat (2016)	Retail environments	PAD

Source: *This study.*

Thus, while the PAD typology has the benefits of parsimony and ease of use, it has been criticised as being too narrow in scope and not encompassing the range of possible variations in emotional reactions (Richins, 1997; Machleit, and Eroglu, 1998; Eroglu *et al.*, 2001). Some studies have suggested a shift to emotion typologies that include a more comprehensive set of emotional responses (e.g. the addition along with the PAD of some of the dimensions of Plutchik (1980) or Richins (1997)). In addition, more and more researchers support the inclusion of further variables in the model that might not necessarily be of an emotional nature; it has been argued that more dimensions can potentially increase the model's explanatory power (Eroglu *et al.*, 2001; 2003; Kim and Moon, 2009; Masara *et al.*, 2010; Wang *et al.*, 2011). Masara *et al.* (2010) have argued for the inclusion of cognitive appraisal dimensions that affect pleasantness. They conceptualise arousal and dominance as forms of appraisal dimensions that ultimately determine the emotional and behavioral outcomes of a shopping experience (e.g. Masara *et al.*, 2010). Others have more clearly suggested the inclusion of consumers' evaluations (Eroglu *et al.*, 2001)—in terms of service quality, for example (Wang *et al.*, 2011)—that can act in conjunction with the emotional variables to mediate the effect of environments on behavior.

Although there are several suggestions for additional variables (both cognitive and emotional), the literature lacks a clear theory-based approach that can provide a rationale for their addition. Researchers have added variables on a somewhat arbitrary basis of convenience,

practical relevance or instinct. These choices, although usually managerially justified, are not based on a clear theoretical background.

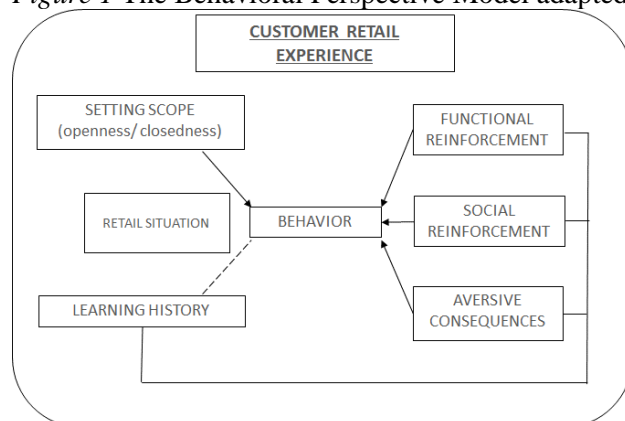
The study described in this paper employed the Mehrabian and Russell's approach and was based on the principles of the BPM, which can explain and justify the addition of variables in the PAD model in an organised, structured way. According to behavioral psychology and the Behavioral Perspective Model, all situations are characterised by reinforcement and aversive consequences. At the same time, a large volume of empirical research indicated that the dimensions of emotional responses (PAD) identified by Mehrabian and Russell can be used to signify and measure the patterns of situational influences (see Yani-de-Soriano *et al.*, 2013). Specifically, previous research (e.g. Foxall and Greenley, 1998; Foxall and Yani-de-Soriano, 2011; Yani-de-Soriano *et al.*, 2013) has proved that *pleasure* is an index of the functional reinforcement signalled by consumption situations. This result occurs because functional reinforcement consists of the benefits and satisfaction contingent in a situation. *Arousal* is a measure of the social reinforcement that indicates the symbolic benefits (status/ social-related). *Dominance* is an indication of the flexibility of the setting (openness/ closedness). Regarding the behavioral measures, approach behavior is expected to increase with the total quantity and quality of reinforcement (functional or social), while avoidance is expected to occur in lower levels of reinforcement. There are also aversive consequences, the unpleasant implications of being in a situation, which reduce the possibility of a behavior re-occurring in the future.

The PAD model has found wide application in retail environment studies especially as a substantiation of the Stimulus-Organism-Response (SOR) model (e.g. Wang *et al.*, 2011). Although both approaches (SOR and BPM) place distinctive emphasis on environmental effects on behavior, the original theoretical basis for our model (BPM) differs from the S-R mediational model on which Mehrabian and Russell rely. The SOR is a theory relying on internal responses

(Organism) which play a mediating role. The BPM, in line with its neo-Skinnerian derivation, proposes that the descriptions of overall situated consumer situations are discriminative stimuli in whose presence certain types of reinforcement or punishment (functional, social and aversive) are likely to occur. This approach would not postulate that the behaviors occurring were mediated in any way by internal affective events such as pleasure, arousal and dominance. Radical behaviorist interpretation has always set itself firmly against mediational theories and against the use of intrapersonal terms. Such intrapersonal terms (as feelings) are, nevertheless, interpreted within operant behaviorism as covert responses, produced by the same reinforcing events that determine overt verbal and non-verbal behaviors [for a further detailed comparison of the two approaches we refer the reader to Foxall and Greenley, 2000, p. 55-56].

According to the BPM stream of research, the behaviors performed in situations depend on the level of reinforcement or aversive consequences received in the past but also the openness or closedness of a setting (refer to Figure 1).

*Figure 1* The Behavioral Perspective Model adapted to explain the concept of customer retail experience



*Figure 1 note:* The dotted line from learning history to behavior indicates that there is no direct relationship between learning history and behavior but indirect through the effect of learning history on reinforcement.

In terms of consumer experiences, the aversive consequences can take the form of confusion as explained subsequently.

### 2.3 Consumer confusion

Overall, consumer confusion has been found to have negative implications for consumers, impeding normal shopping behavior (Mitchell *et al.*, 2005; Spiteri Cornish and Moraes, 2015; Garaus, and Wagner, 2016). It reduces satisfaction and increases purchase abandonment and decision delegation (Cheng *et al.*, 2015). Already in 1986, Sproles and Kendall identified confused from overload as one of the main consumer shopping styles. Understanding information overload has created lively debates over the years (see Ketron *et al.*, 2016 for a discussion). Walsh *et al.*, (2007) and Walsh and Mitchell (2010) have supported this dimension of confusion through their series of studies defining “overload confusion as been confronted with more product and market information and alternatives than consumers can process” (Walsh *et al.*, 2007, p. 704; see also Lee and Lee, 2004). Another related stream of research has been preoccupied with a conception and appreciation of confusion caused by imitation strategies (Foxman *et al.*, 1992; Miceli and Pieters, 2010). Perceived similarity describes the state where different products in a product category are visually and functionally similar (Foxman *et al.*, 1992; Walsh *et al.*, 2007, p.702). Overload and similarity confusion have been developed based on the personality trait tradition however confusion has been described as situation dependant and the above dimensions can be highly situation specific (Walsh *et al.*, 2007). Further research has been requested in order to explore the implications of a situation specific understanding of the dimensions of confusion (Walsh *et al.*, 2017).

In terms of its behavioral nature, confusion depends on the situation, specifically the arrangement of the environment; and it can be conceptualised as a case of self-tracking (self-based rule)– Kunkel, 1997; Törneke *et al.*, 2008. Skinner (1966) argued that human behavior is frequently based on self-rules that are developed so that a person can react more effectively now or in a future occasion than when based on the environmental contingencies alone. The rules formulated act then as a learning history (history of reinforcement or aversive consequences) which the individual can rely on. The case of tracking (a type of rule suggested by Zettle and

Hayes, 1982, p. 79–92) is a case of “responding to brute environmental facts” like the arrangement of the physical environment (Foxall, 2013, p. 118). Confusion can be understood as a case of a self-based track as it is developed as a response to environmental/ retail conditions. According to Glenn (1987) tracks (confusion) can function as antecedents to behavior (Catania, 1989). Please refer to table 2 for a review of all key terms related to the conceptual framework.

*Table 2. Key terms and their definitions*

<b>Terms</b>	<b>Definitions</b>	<b>Source</b>
Retail customer experience	The totality of reinforcement and aversive consequences of the retail situation that consumers encounter over time within the context of interactions with retailers.	This study
Retail situation	The interaction between the discriminative stimuli that comprise the behavior setting during a retail encounter and the individual’s history of reinforcement and aversive consequences in similar settings (accumulation of previous retail experiences). The consumer situation locates consumer behavior in space and time.	Foxall, 1992, p.190-192; 2013, p.110-111
Learning history	The occurrence of previous reinforcements and aversive consequences (previous exposure and experiences).	Foxall, 1992, p.190-192; 2013, p.110-111
Functional reinforcement	Reinforcement that stems from the functional and emotional benefits of consumption. It consists of the benefits and satisfaction contingent in a situation and is determined by the learning history.	Foxall, 1992, p. 190-192; 2013, p.110-111
Social reinforcement	Reinforcement that stems from the symbolic benefits like social status, self-esteem, pride, and honor (status/ social-related) and it acts as feedback on how well someone performs.	Foxall, 1992, p. 190-192; 2013, p.110-111
Behavior setting scope	The consumer behavior setting (openness/ closedness) is an indication of situational flexibility. Relatively open settings like being at a party are marked by an absence of physical, social, and verbal pressures to conform to requirements or constraints imposed by others. Closed settings (like being in a library or church) impose more constraints.	Foxall, 1992, p.190-192; 2013, p.110-111
Aversive consequences	The unpleasant implications of being in a situation. These reduce the possibility of a behavior re-occurring in the future.	Foxall, 1992, p.190-192; 2013, p.110-111
Consumer confusion	A rule developed to characterise the lack of product related guidance. Consumer behavior is severely impeded due to the interaction with confusing environments. As such confusion is an aversive consequence of retailing describing product related overload or similarity.	Anninou <i>et al.</i> , 2015; this study

## 2.4 Hypotheses development

Based on the underpinnings of the above theoretical understanding: Confusion is a rule developed to characterise the lack of product related guidance. Consumer behavior is severely impeded due to the interaction with confusing environments. As such confusion is an aversive consequence of retailing, describing product related overload or similarity, and it acts along with reinforcers and the setting scope to predict approach and avoidance behavior in accordance to the BPM (see figure 1).

**H1: Approach behavior will be determined positively by the functional (pleasure), social (arousal) reinforcement, setting scope (dominance), and negatively by the aversive consequences (confusion) of retail experiences.**

**H2: Avoidance behavior will be determined negatively by the functional (pleasure), social (arousal) reinforcement, setting scope (dominance), and positively by the aversive consequences (confusion) of retail experiences.**

Further to the above rational, according to the principles of the BPM and PAD, the functional reinforcement, social reinforcement, setting flexibility and confusion (aversive consequence) can facilitate the examination and establishment of overall differences in experiences and define behavior.

#### 2.4.1 The role of experience/ learning history

Several theoretical approaches (and especially the behavioral) acknowledge that the levels of experience that characterise a situation regulate decision making in this context (see table 3). When a market is characterised by greater levels of experience, it is perceived as more habitual, and consumers eventually develop more rules that can help them with their decision making (Zettle and Hayes, 1982).



Table 3. Behavioral approaches to decision making

	Low experience	High experience
<b>BPM</b>	<b>Other rules:</b> Consumers lack a relevant learning history; this prompts a search for other rules, external or internal to the individual	<b>Self-rules:</b> Acquisition of a learning history, from which self-rules can be extracted

Source: adapted from Foxall, 1997 (p. 105-106).

Greater experience within a market represents a stronger previous learning history in this situation. Based on the principles of the BPM, differences in learning history act to determine levels of reinforcement and aversive consequences; a comparison of differing situations can be facilitated based on this understanding. At the same time, reinforcers, aversive consequences, and setting scope values are orthogonal, meaning that any level of any variable in a situation could be accompanied by any levels of the other (Foxall and Yani-de-Soriano, 2005; Foxall *et al.*, 2006). When a consumer takes a trip to an exotic island, this “situation” can be accompanied by great levels of functional and social reinforcement and, simultaneously, great levels of aversive consequences (increased cost, increased negative gossip, etc.). These levels are expected to vary freely among markets and determine consumer behavior at differing levels.

When consumers have greater experience in a market, they eventually develop more expertise that helps them to navigate more easily. This development of market expertise reduces the market levels of confusion as lack of guidance. Consumers will use this expertise in order to reach easier decisions and achieve a particular goal point. Thus, levels of confusion are expected to be lower as a result of greater overall levels of experience.

**H3: Confusion will be greater in the market characterised by lesser levels of experience (compared to the market with greater levels of experience).**

Pleasure (representing the functional reinforcement (benefits and satisfaction) of situations) and arousal (representing the social (feedback on performance)) are expected, as

opposed to confusion, to be more in situations characterised by less experience/familiarity. Excitement has been described as a combination of high arousal and high pleasure (Baker and Wakefield, 2012). As explained above, habitual experiences are those that do not produce consumer excitement (pleasure and arousal). These habitual experiences are usually mundane and everyday situations that do not provide feedback on performance (Baharrel and Denison, 1995). At the same time, other more practical factors are also key. High technology products can serve both utilitarian (work) and hedonic (entertainment) purposes, and as such, are not considered mundane by consumers (Parasuraman and Colby, 2001; Lee *et al.*, 2011), thereby increasing the functional and social reinforcement in a situation.

**H4: Pleasure and arousal will be greater in the market characterised by lesser levels of experience (compared to the market with greater levels of experience).**

The levels of dominance (representing the openness or closedness of settings), depend on aspects like whether there are readily available alternatives to being in the specific setting, and whether the consumer or someone else controls access to (or deprivation of) the reinforcers (as in Foxall, 1999). An interesting debate can take place regarding this hypothesis. On the one hand, accumulated empirical evidence has demonstrated the positive effect of experience or mastery on people's control of reinforcement (Rotter, 1966). At the same time, a high-experience market is the one that involves stronger learning history and self-rules, facilitating consumer overall control in this market. In contrast, as both of the situations examined in this study are relatively open shopping situations, consumers should feel relatively free in both to act and determine their choices (what has been called as "consumer democracy" Schweizer *et al.*, 2006), thus differences in dominance might be minimal as consumers feel relatively free in both. Following the logic of our main theoretical background (but remaining flexible accepting that differences might be minimal between these two retail markets) we propose that:

**H5: Dominance levels will be greater in the market characterised by higher levels of experience (compared to the market with lesser levels of experience).**

Finally, one of the main arguments of the BPM is that a behavior may be expected to increase with the total quantity and quality of reinforcement available (Yani-de-Soriano *et al.*, 2013). In the present study, the authors test this assumption and hypothesise that the market with higher functional and social reinforcement (in this case, the low-experience market) will indicate higher levels of approach and lower levels of avoidance behavior.

**H6: Approach (avoidance) behavior will be greater in the market with the higher (lesser) levels of reinforcement.**

### **3. Methodology**

#### *3.1 Measures*

Mehrabian and Russell's (1974) scales of the measurement of pleasure, arousal, and dominance (PAD) were used without modification in this study. These three variables are constructed after the semantic differential approach. Each affective variable was measured on six items in terms of which the situation in question was rated on a nine-point scale. The pleasure (e.g. unsatisfied–satisfied) dimension ranged from extreme feelings of dissatisfaction to extreme satisfaction. The arousal (e.g. calm–excited) dimensions ranged from extreme feelings of calmness to extreme excitement. The dominance (e.g. submission–dominance) dimension ranged from extreme feelings of lack of control upon one's environment to feelings of being extremely in control. Following the original instructions by Mehrabian and Russell (1974), three of each of the six PAD items (nine in total) were inverted in their direction in order to minimise bias, and all the items were presented in a random order (see Appendix 1).

Approach and avoidance were measured by means of the six of Mehrabian and Russell's (1974) approach and avoidance measurement. The six original statements have been selected to match previous research on BPM (all items used can be seen in Appendix 1). These represented approach and avoidance dimensions like time spent, exploration and friendliness. The distinctive characteristics and differences of reflective and formative constructs have been widely discussed in the business and marketing literature (e.g. Diamantopoulos et al., 2008; Finn and Wang, 2014). Specifically, the indicators representing reflective constructs are said to denote manifestations of (cause) the latent construct, are approximately interchangeable in meaning while indicating positive intercorrelations. At the other end in formative measurement, the indicators are causes of the latent construct (measures form or induce an underlying latent variable) and can even indicate negative or zero correlations (Diamantopoulos et al., 2008). The original "approach" and "avoidance" measurement indicates clear characteristics of formative measurement. The statements measure different dimensions of approach and avoidance behavior (time spent, exploration and friendliness levels) that form the final approach or avoidance behavior. Approach and avoidance have been treated as such (formative) in this analysis.

Two dimensions of confusion- similarity and overload- were measured using Walsh *et al.*'s (2007; Walsh and Mitchell, 2010) scale. Since the root cause of overload is complexity in the market place while in the case of similarity is homogeneity, including both overload and similarity was judged as essential for comprehension of different market dynamics. Finally, the measure used as manipulation check for general market experience was measured with a single item, adapted from Laroche *et al.* (2003).

Due to the online nature of the data collection technique, several pilot tests (mainly in the form of one-to-one completion of the research instrument) were used to assure the validity and reliability of scales. An important contribution of the initial pilot stage has been the adaptation of

the confusion measures to the context by adding the words “groceries” and “PC/laptops”. The original scale generally referred to products and information in the market and initially, it was decided to use the scale intact. Most participants found this unclear, and all advocated for the inclusion of specific words in the final scales so that these better represented each of the two market situations. For example, the statement “*there are many similar products*” was replaced by “*there are many similar grocery (or PC/laptop) products.*”

### 3.2 Data collection

Data were collected in the UK, through an online research panel. The questionnaire was developed and pilot tested by the authors and the link was sent (by the panel project manager in collaboration with the first author) to approximately seven hundred participants and two-hundred and sixty questionnaires were deemed usable (520 when both situations are studied together) for the purposes of this analysis. This choice secured a diverse sample that bears the characteristics of real consumers and the UK population. The sample was chosen to be a cross-section of the population. Respondents were asked to complete the questionnaire based on two retail markets, grocery and high technology (PC/laptop). Six diverse retail situations were explored as potential candidates for this study (mobile, laptop, grocery, home insurance, car insurance, home buying). Options were discussed with two field experts before reaching the decision for the two markets. The two situations chosen were expected to act as a good background for the study in that they represent different levels of learning history and experience (lower levels of experience/learning history are expected in the personal computer (PC)/laptop market and higher in the grocery market). Grocery shopping has been used in previous research studies to represent “a routine buying situation” (Baharrel and Denison, 1995), whereas buying high technology products has been used to represent “exciting,” “novel,” or “innovative” situations (Parasuraman and Colby, 2001; Lee *et al.*, 2011). In terms of shopping frequency, consumers may be expected to be much

more familiar with grocery shopping compared to shopping for high technology products, as the former is a more frequent activity. The levels of experience/learning history characterising a situation regulate decision making in this context (Kaas, 1982; Foxall, 1997, p. 105-106).

Participants were asked to reflect and answer the questionnaire based on verbal descriptions (vignettes) of the two situations, asking them to imagine they were shopping in a grocery or technology store and answer the questionnaire. This choice allowed the examination of participants' own learning history and previous experiences in similar conditions. The markets were randomly presented to participants in order to avoid bias; 134 respondents were presented with grocery shopping first, while 126 had PC/laptop shopping first. This variation was judged as sufficient for minimising order effects (Thomas and Morwitz, 2005). Of the 260 participants, 123 identified themselves as males (47.3 per cent), and 137 as females (52.7 per cent). Participants further identified their ethnic group as follows: 89.2 per cent white, 2.3 per cent mixed, 6.5 per cent Asian (or Asian British), 1.2 per cent black, and 0.8 per cent other (e.g. Arab). A majority of respondents (60 per cent) lived in larger households (three or more persons). However, following the trend towards smaller households, 40 per cent lived in either one-person (15 per cent) or two-person households (25 per cent).

## **4. Results**

### *4.1. Analysis technique*

This research uses the method of partial least squares, implementing a variance-based structural equation modelling (SEM) analysis with Smart PLS (Hair *et al.*, 2012; Driediger and Bhatiasevi, 2019). This approach is the preferred method when managing formative measures and it has less strict requirements on multivariate conditions and sample size when compared to the covariance-based SEM method (Hair *et al.*, 2012). To start with, missing data were explored. Missing data were rare and the Little's MCAR (Missing Completely At Random) test has indicated that data

are missing completely at random. Considering that the regression based substitution is generally the proposed method (Allison, 2009, p. 87), this study has utilised this approach for handling the few missing cases. Measurement model assessment was completed before conducting the hypothesis testing. For the testing of the first two hypotheses (H1-H2), we conducted a bootstrapping procedure with replacement using 5,000 subsamples to calculate the statistical significance of the parameter estimates. ANOVA processes were used to test the final H3-H6 market comparison hypotheses.

#### *4.2. Manipulation check*

Beyond the use of experts, at the early stages of this study, to assist with the choice of markets, one further check confirmed that the choice of markets could meet the requirements of the study. In particular, the two markets differ significantly on the levels of experience reported- the means have been Grocery 5.32; PC/Laptop 4.80,  $F(1, 519) = 18.295$ ,  $p < 0.05$ .

#### *4.3 Measurement assessment*

Following the exploratory phase, this study used a two-step analysis approach. Firstly, the measurement was assessed- by testing and evaluating the reliability and validity of the scales. Secondly, the model was analysed in order to test the structure and to evaluate the model's ability to predict a certain outcome. Initially an exploratory factor analysis, incorporating the Varimax option, assessed the validity of the measurement for the indicators ( $KMO=0.909$ ;  $Sig.=0.000$ ). Following this process and mainly the subsequent exploration of the measurement model in Smart PLS, the arousal items: A1 Calm...Excited and A2 Frenzied...Sluggish and dominance items: D1 Autonomous...Guided and D4 Influenced...Influential were removed due to low loadings (below 0.50). Internal consistency reliability was tested, and the Cronbach alpha results supported the dimensionality and provided evidence of construct reliability. In order to investigate convergent validity, average variance extracted (AVE) and composite reliability

(CR) indices were also examined (see table 4). The AVE of each construct was larger than 0.5 and CR was larger than 0.7. AVE and CR do not apply to the formative endogenous measures of approach and avoidance where weights, VIF multicollinearity indices and T values have been suggested as appropriate in case of formative measures from the literature (Limayem *et al.*, 2007; Bruhn *et al.*, 2008). As in the case of formative measures each indicator represents a unique information source of the main construct, dropping items has more theoretical implications. The way to judge this is through the significance of a weight; significance suggests a substantial contribution and relevance while insignificance suggests a negligible contribution from the investigated item (Urbach and Ahlemann, 2010). Validity was demonstrated and all items were retained based on the results of the analysis (table 4).

Regarding the reflective measures the analysis confirmed that the items measured only one construct and convergent validity was satisfied. The square root of the AVE of each construct was used to investigate discriminant validity, in accordance to the Fornell-Larcker criterion (1981). The results reported in Table 5 confirm that discriminant validity was established. Discriminant validity was also established when looking at the heterotrait-monotrait ratio of correlations (HTMT), which is an alternative approach to assess discriminant validity, and according to Henseler *et al.*, (2015), more appropriate when using variance-based structural equation modelling (compared to cross loadings and the Fornell-Larcker criterion). A HTMT value below 0.85 means that discriminant validity has been established between two reflective constructs (Kline, 2015). As reported in Table 6, all values are within this range.

Common method variance (CMV) was also tested. Hartman's single factor technique showed that the single factor explained 0.26 of total variance, well below the 0.5 threshold.

*Table 4. Descriptive Statistics, Validity Indices and Loadings*

<i>Reflective</i>						
Factor	Mean (Sd)	$\alpha$	Loadings	CR	AVE	T value



<b>P</b>	37.8 (9.1)	0.92		0.94	0.72	
<i>P1</i>			0.883			70.315***
<i>P2</i>			0.876			64.901***
<i>P3</i>			0.871			69.523***
<i>P4</i>			0.874			69.46***
<i>P5</i>			0.759			23.526***
<i>P6</i>			0.833			45.73***
<b>A</b>	21.4 (5.0)	0.71		0.81	0.52	
<i>A3</i>			0.675			11.981***
<i>A4</i>			0.635			13.305***
<i>A5</i>			0.691			13.642***
<i>A6</i>			0.871			56.675***
<b>D</b>	21.8 (4.3)	0.70		0.81	0.52	
<i>D2</i>			0.706			17.299***
<i>D3</i>			0.736			18.157***
<i>D5</i>			0.659			13.494***
<i>D6</i>			0.78			23.795***
<b>SC</b>	16.9 (5.5)	0.91		0.94	0.80	
<i>SC1</i>			0.874			43.904***
<i>SC2</i>			0.936			121.662***
<i>SC3</i>			0.921			90.299***
<i>SC4</i>			0.844			41.495***
<b>OC</b>	16.2 (5.5)	0.86		0.90	0.70	
<i>OC1</i>			0.748			17.083***
<i>OC2</i>			0.875			38.297***
<i>OC3</i>			0.883			44.944***

OC4			0.846			38.164***
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*Formative*

	Mean (Sd)		Weights	VIF		T value
<b>AP</b>	12 (3.3)					
AP1			0.255	1.272		4.074***
AP2			0.773	1.522		14.476***
AP3			0.164	1.245		2.688**
<b>AV</b>	8.6 (4.1)					
AV1			0.641	1.515		6.485***
AV2			0.230	1.32		2.603**
AV3			0.332	1.697		3.027**

Note: P = Pleasure; A = Arousal; D= Dominance; SC = Similarity Confusion; OC = Overload Confusion; AP = Approach Behavior; AV = Avoidance Behavior.

Significance level where, \* <0.05, \*\* < 0.01, \*\*\* <0.001

*Table 5. Discriminant Validity Indices*

Fornell-Larcker criterion (Reflective Measures)

	P	A	D	SC	OC
<b>P</b>	<b>0.850</b>				
<b>A</b>	0.600	<b>0.724</b>			
<b>D</b>	0.515	0.358	<b>0.722</b>		
<b>SC</b>	-0.176	-0.132	-0.181	<b>0.894</b>	
<b>OC</b>	-0.152	-0.033	-0.214	0.675	<b>0.840</b>

Note: P = Pleasure; A = Arousal; D= Dominance; SC = Similarity Confusion; OC = Overload Confusion.

*Table 6. Discriminant Validity Indices*

Heterotrait-monotrait ratio of correlations matrix (Reflective Measures)

	P	A	D	SC	OC
<b>P</b>	-				
<b>A</b>	0.688	-			
<b>D</b>	0.636	0.441	-		
<b>SC</b>	0.193	0.153	0.222	-	
<b>OC</b>	0.156	0.162	0.265	0.778	-

Note: P = Pleasure; A = Arousal; D= Dominance; SC = Similarity Confusion; OC = Overload Confusion.

#### 4.4. Hypothesis testing

To examine H3 to H6 on market comparisons, this study uses SPSS 25 and analysis of variance (ANOVA) between the two markets on levels of pleasure, arousal, dominance, approach, avoidance, similarity, and overload confusion as dependent variables. The result of hypotheses 3-6 on market comparisons are presented in table 7.

*Table 7. Means and ANOVA results for the two situations (N=260 for each market)*

Context	P	A	D	AP	AV	SC	OC	Market Experience
<b>Grocery (a)</b>	35.70	20.48	21.73	11.22	9.30	16.68	15.1	5.32
Mean (Sd)	(9.1)	(5.6)	(4.1)	(3.2)	(4.4)	(5.2)	(5.2)	
<b>PC/Laptops (b)</b>	39.88	22.32	21.87	12.80	7.90	17.17	17.2	4.80
Mean (Sd)	(8.7)	(4.2)	(4.4)	(3.3)	(3.8)	(5.7)	(5.6)	
<b>Anova Results</b>								
<b>(Difference between the markets)</b>	F(1,519)= 28.430**	F(1,519)= 18.117**	F(1,519)= 0.134 NS	F(1,519)= 30.010**	F(1,519)= 15.831**	F(1,519)= 1.009 NS	F(1, 519)= 18.281**	F(1,519)= 18.295**

Note: P = Pleasure; A = Arousal; D= Dominance; SC = Similarity Confusion; OC = Overload Confusion; AP = Approach Behavior; AV = Avoidance Behavior.

\*\*Difference significant at the 0.01 level (2-tailed)

\*Difference significant at the 0.05 level (2-tailed)

NS= Not Significant

Grocery shopping indicates significantly less functional and social reinforcement than the high technology buying (H4) [Functional reinforcement: Grocery 35.70; PC/ Laptops 39.88, F(1,519)= 28.430,  $p < 0.05$ / Social reinforcement: Grocery 20.48; PC/ Laptops 22.32, F(1,519)= 18.117,  $p < 0.05$ ]. There is no significant difference in the levels of openness/ closedness [Openness/ closedness: Grocery 21.73; PC/ Laptops 21.87, F(1, 519)= .134, ns] for (H5) (most possibly a result of the two markets being part of today's open retail environments). This result leads to the conclusion that high technology buying should have more approach but less avoidance behavior because it is characterised by greater levels of reinforcement overall (H6), this is in accordance with this study's data. [Approach: Grocery 11.22; PC/ Laptops 12.80, F(1,519)= 30.010,  $p < 0.05$ ; Avoidance: Grocery 9.30; PC/ Laptops 7.90, F(1,519)= 15.831,  $p < 0.05$ ]. Due to the formative nature of this construct, the market differences were tested as well at each of the individual items level of Approach and Avoidance. The results are presented

here for clarity and overall provide further support for H6: AP1: Grocery 3.62; PC/ Laptops 4.30,  $F(1,519)= 49.388$ ,  $p<0.05$ ; AP2: Grocery 4.06; PC/ Laptops 4.81,  $F(1,519)= 30.333$ ,  $p<0.05$ ; AP3: Grocery 3.53; PC/ Laptops 3.67,  $F(1,519)= .871$ ,  $p>0.05$  (not significant); AV1: Grocery 3.05; PC/ Laptops 2.34,  $F(1,519)= 23.614$ ,  $p<0.05$ ; AV2: Grocery 3.47; PC/ Laptops 3.19,  $F(1,519)= 3.055$ ,  $p<0.05$ ; AV3: Grocery 2.82; PC/ Laptops 2.37,  $F(1,519)= 9.637$ ,  $p<0.05$ .

Levels of similarity confusion do not indicate significant differences between the two markets [Similarity: Grocery 16.68; PC/ Laptops 17.17,  $F(1,519)= 1.009$ , NS], but overload confusion is greater in the lower experience situation [Overload: Grocery 15.1; PC/ Laptops 17.2,  $F(1,519)= 18.281$ ,  $p<0.05$ ]. Overall, H3 (on confusion) is partially supported (supported only for overload confusion), and H4 (on functional and social reinforcement), and H6 (on approach/avoidance) are fully supported. H5 (on openness/ closedness) is not supported- however the equal levels of dominance can be justified.

#### *4.5. Approach and Avoidance Behavior- Assessment of the structural model*

The Partial Least Square (PLS) method was used to confirm the hypothesised relations for H1 and H2. PLS-SEM uses bootstrapping with repeated random sampling to create a bootstrap sample (Hair *et al.*, 2011). Our findings regarding H1 and H2 are presented below (see Table 8). Path coefficients and levels of significance are displayed.

#### *4.6. The role of reinforcement and aversive consequences*

We found a positive and statistically significant relationship between the path pleasure (P) and approach (AP) and a negative and statistical significant relationship between the path similarity confusion (SC) and approach (AP) (See Table 8). Similarly, a negative and significant relationship between pleasure (P), arousal (A) and avoidance (AV); and a positive and significant relationship between overload confusion (OC) and avoidance (AV). These results are consistent with the notion that approach and avoidance behavior are determined by levels of pleasure, arousal

and confusion. Dominance indicates no significant relationships with either approach or avoidance. Previous research similarly indicates that pleasure has the greatest influence on the prediction of the dependent variables, approach and avoidance (Foxall and Yani-de-Soriano, 2011). In this study this influence is followed by arousal and confusion, while dominance has not been found to contribute to the explanation of approach and avoidance behavior (see similar results in Donovan and Rossiter, 1982).

Although model fit indices for PLS-SEM, and their critical threshold values, are subject to further research (Hair *et al.*, 2017), the model fit indices provided by the software are presented (see table 8). An assessment of the SRMR (Standardized Root Mean Square Residual) has been used to evaluate the specific model fit. A SRMR value of 0.062 for the saturated model and 0.062 for the estimated model are below the suggested threshold of 0.08 (Hu and Bentler, 1999), suggesting a good fit.

Table 8. Model's path coefficients (standardised estimates): Approach & Avoidance

Path	Path coefficient	t-value	p-value	Hypothesis
P → AP	0.65	15.5	0.000 <sup>***</sup>	Relationship supported
A → AP	0.04	0.90	0.318 <sup>NS</sup>	Relationship not supported
D → AP	0.02	0.40	0.683 <sup>NS</sup>	Relationship not supported
SC → AP	-0.116	2.855	0.004 <sup>**</sup>	Relationship supported
OC → AP	-0.046	1.144	0.253 <sup>NS</sup>	Relationship not supported
P → AV	-0.454	7.047	0.000 <sup>***</sup>	Relationship supported
A → AV	-0.147	1.954	0.011 <sup>**</sup>	Relationship supported
D → AV	-0.08	1.643	0.100 <sup>NS</sup>	Relationship not supported
SC → AV	0.025	0.532	0.596 <sup>NS</sup>	Relationship not supported
OC → AV	0.209	4.028	0.000 <sup>***</sup>	Relationship supported

AP AR<sup>2</sup> = 0.473; AV AR<sup>2</sup> = 0.303; SRMR= 0.062; d\_ULS=1.536; d\_G=0.429; NFI=0.87

Note: P = Pleasure; A = Arousal; D= Dominance; SC = Similarity Confusion; OC = Overload Confusion; AP = Approach Behavior; AV = Avoidance Behavior. Significance level where, \* <.05, \*\* < .01, \*\*\* <.001, NS = Not significant. AR 2 = (adjusted) coefficient of determination, SRMR = Standardized root mean square residual; d\_ULS = nweighted least squares discrepancy, d\_G = geodesic discrepancy, NFI = Non-Fuzzy Index.

In addition, a multi-group analysis was performed using partial least squares multi group analysis (PLS-MGA). This form of analysis is based on PLS-SEM bootstrapping results and a significance test is provided to explain any path differences between groups. The analysis has

been grouped based on the two markets (Grocery and PC/Laptop). A p-value smaller than 0.05 or greater than 0.95 for a given group-specific difference in path coefficients represents statistical significance. The results are reported in Table 9. The results indicate that there are no significant differences in the paths between the two markets.

*Table 9. Multi-group analysis of approach and avoidance behavior (Grocery vs PC/Laptop Market)*

Path	Path difference	p-value (Grocery vs. PC/Laptop)
P → AP	0.077	0.398
A → AP	0.056	0.543
D → AP	0.113	0.180
SC → AP	0.019	0.828
OC → AP	0.034	0.685
P → AV	0.149	0.279
A → AV	0.123	0.382
D → AV	0.132	0.220
SC → AV	0.131	0.207
OC → AV	0.178	0.121

Note: P = Pleasure; A = Arousal; D= Dominance; SC = Similarity Confusion; OC = Overload Confusion; AP = Approach Behavior; AV = Avoidance Behavior.

*p <0.05 and >0.95 both significant*

## 5. Discussion

The relevant literature on customer experience clearly indicates that further studies exploring this central marketing concept are required (Terblanche, 2018). The gaps pertain mainly to the nature of the concept and the role of previous experiences on the way that these influence consumers' reactions. Based on two well-established theories of retail environments we provide a relevant framework explaining experiential reinforcements and aversive consequences. Specifically, four elements that are indicative of the effect of functional (pleasure), social (arousal), openness and closedness (dominance) and lack of knowledge/ clarity (confusion) are suggested as forming customer retail experience. Consumers in every encounter are as well influenced by their previous experiences through their learning history which

influences the aforementioned reinforcers and aversive consequences of a situation and subsequently behavior.

Until recently, studies exploring retail environmental elements and their effect on behavior usually use the emotional variables of pleasure and arousal as mediators of the relationship (e.g. Walsh *et al.*, 2011). Findings are not always consistent, and many studies have requested the addition of variables and a re-examination of the cognitive and emotional dimensions in order to improve the predictive ability of the PAD model (Eroglu *et al.*, 2001; 2003; Kim and Moon, 2009; Masara, *et al.*, 2010; Wang, *et al.*, 2011). This study extends the emphasis placed by earlier researchers on the importance of understanding the drivers of approach-avoidance behaviors (Donovan and Rossiter, 1982; Foxall and Yani-de-Soriano, 2005; Yani-de-Soriano *et al.*, 2013) and provides theoretical guidelines and empirical evidence to the novel theoretical premise that confusion can act in conjunction with other forms of retail experiential reinforcers and the setting to form behavior. Confusion caused by too many or very similar conditions can be treated as negative experiential consequence.

This study has summarised the conception of the BPM where functional and social reinforcement and the aversive consequence (confusion) are described as the consequences of situational exposure and learning history. These consequences result in approach or avoidance behavior in situations. The dimensions of the PAD model followed the patterns expected from the examination of the BPM when examining the two situations based on the learning history, with significant differences identified between overload confusion, pleasure, arousal, and behavior, and no differences in the case of dominance. Three key objectives have been set as part of the endeavour: (1) exploring the implications of treating customer experience and confusion at a behavioral level, (2) understanding the effect of a negative driver of approach and

avoidance behavior within two markets and (3) exploring the implications of the learning history within these situations.

### *5.1 Confusion as an aversive experiential consequence*

The PAD measurement of emotional reactions to environments has been used to conceptualise the functional and social reinforcement, and behavior setting scope. In this study confusion has been treated as an aversive consequence of being and shopping in retail situations. In this case, confusion represents a case of track, a rule that describes the lack of product clarity in retail experiences. The levels of confusion reported for each retail situation have been treated at an overall level and describe the levels of similarity and overload confusion that being in different situations entails. Concurrently, levels of functional reinforcement, social reinforcement and closedness/openness of the settings have been described. It is relevant to argue that according to the principles of the PAD model and BPM, these variables should be perceived as orthogonal and they are expected to determine consumer behavior at differing levels. This principle was verified by the data. For example, there was no relationship between confusion and pleasure identified, meaning that the market with higher confusion did not have lower pleasure levels as it could be expected. The theoretical positioning of this paper creates a solid basis for continuing exploration not only of consumer confusion; essentially it offers avenues for the ubiquitous concept of customer experience, which has been described in terms of reinforcement and aversive consequences consumers encounter in retailing. Importantly, the dimension of learning history, a key concept determining reinforcers and aversive consequences and subsequently behavior and can further our understanding of previous retail experiences role in determining overall experience.

### *5.2 Confusion and behavioral consequences*



Confusion as a variable had a rather small but significant contribution to the model for the two behavioral variables. The greater change is with avoidance (overload confusion), and the change is lower with approach (similarity confusion). These results should not be perceived as trivial; these indicate that aversive elements of retail markets do have an effect on behavior and, importantly, these elements act along with the reinforcement received from these situations. The main aim of this study has been to identify aversive consequences that, in accordance with the BPM, work along with functional (pleasure) and social (arousal) reinforcement and the behavior setting scope (dominance) to determine consumer behavior. The study has been successful in that aim.

Moving from the “behavioral” approach to the theoretical background concerned with the nature of cognitions, emotions, and emotional experiences, the findings of this study may be of immense interest. Although such considerations are not part of the main theoretical framework of this study per se, it is worthwhile to explore their theoretical implications. In accordance with most cognitive models (including the PAD and SOR), the effect of confusion on behavioral variables would have been treated in most research studies as being mediated by emotional elements (Schweizer, 2004; Vieira, 2013). The fact that confusion has a significant main effect along with these emotional elements could be perceived as (1) appealing researchers who request the addition of more dimensions in the PAD model, or (2) corroborating the findings by Rozin and Cohen (2003).

In the first case of addition of valid variables to the PAD, the addition of confusion is based on a sound theoretical rationale rather than arbitrary considerations. On the second argument, Rozin and Cohen (2003) found evidence to support the idea that confusion could be included in the category of emotions, or at least that of affect. What can be argued based on the current findings is that, seen from this perspective, confusion might have clear emotional

implications in retail situations, which can be directly translated into behavioral consequences. If pleasure and arousal are treated as being the “*affective qualities attributed to an environment*” (Russell and Pratt, 1980) then confusion is likely to have equal emotional qualities.

### *5.3 Customer retail experience and learning history*

All interactions with a retailer (past or through alternative channels) have been described as forming customer experience (Lemon and Verhoef, 2016). Learning history is a central element of the retail situation and determines the levels of behavior based on previous reinforcement and aversive consequences encountered. Experience in a market place indicates the amount of rules developed by consumers to enhance the reinforcement and reduce the aversive consequences and differences in experience (effect of a learning history) allow for the comparison of levels of reinforcement and aversive consequences induced by situations.

According to this rationale, the high technology market (characterised by lower learning history and experience) indicated higher overload confusion but similar levels of similarity confusion when compared to the market where consumers have more experience. The high technology market further indicated higher levels of functional and social reinforcement, and similar levels of openness. According to expectations and previous behavioral studies, behavioral levels were chiefly determined by the reinforcement of the environment; thus, approach levels was higher and avoidance levels lower for this market.

### *5.4 Managerial implications*

Offering a context that facilitates the development of reinforcers and minimises aversive consequences will provide retailers with the means to increase approach and decrease avoidance behavior. This study establishes the use of the PAD, confusion, and behavioral measures when managers plan to measure the levels of reinforcing, aversive, and behavioral consequences of a

market situation. The PAD scale is a well-established tool for comparison of the different levels of pleasure, arousal, and dominance, which this study interprets as functional and social reinforcement and closedness or openness of a setting. These variables can be used to measure the type of value that products provide before any new product launches, and for testing and comparing different formats of retail stores. The use of this approach will allow the prediction of consumers' responses to these situations (e.g. formats offering symbolic benefits are expected to provide more approach).

Secondly, the study of confusion indicates that managers should remain highly focused on removing any sources of consumer decision impediment because these are aversive consequences that affect consumers' approach behavior. Finding the optimal combination of the number of products and the amount of information, and allowing discrimination between different alternatives, is the ideal situation. Managers should add clarity and remove any sources of consumer behavioral impediment because these seem to produce a "difficult environment" and have an especially strong effect on consumers' avoidance behavior (customers spend less time in a retail store, do not want to interact or explore the environment, etc.). Additionally, functional reinforcement seems to have the highest contribution to consumer approach and avoidance behavior. It can be the main point of improvement when retailers are looking to increase patronage.

Importantly, as markets become mundane and consumers get acquainted with the rules of the marketplace, more effort is required to increase the functional and social reinforcement that they receive from each encounter and experience. This is a valuable lesson for retailers who need to battle this effect through marketing communications, promotions and environmental adjustments to keep the momentum in the marketplace. This has implications both at the store (or any other retail channel) level but also at the overall market level.

Finally, similarity of products and information does not differ depending on the levels of experience. The grocery market in the UK is a market indicating great price elasticity—one where consumers change the brand they buy based on small promotional or price offers (Mintel, 2016) and studies have been implemented in the past, concerning especially the existence of me-too, ‘copycats’ or look-alike products and brands (Balabanis and Craven, 1997). Price elasticity is an indication of undifferentiated branding. Grocery stores are also the kind of environments where all products are positioned very close together (consider a grocery store in comparison to an Apple store) and this fact might justify the equal levels of similarity confusion. Thus, although consumers in a high technology market lack experience, this lack might be compensated by the attempts of the industry to provide more structured retail environments and better differentiated products. Marketers and store designers ought to 1) pay more attention to the design of grocery stores (that seem to suffer from similarity issues equally to high technology), 2) revise category management techniques which focus on shelf arrangement, 3) re-examine the practice of constant introduction of new products which simultaneously make use of very similar marketing strategies as their counterparts. To conclude, building powerful brands could be a way to decrease the issue of similarity in any market.

### *5.5 Limitations and future research*

The current conceptualisation of customer experience and consumer confusion makes some novel propositions on the feasibility of exploring familiar concepts based on behavioral psychology. The implications of this suggestion have been explored based on two retail situations. No matter the fact that these situations differed on the key dimension of learning history, in this study these were chosen not to differ significantly in terms of some other characteristics e.g. both are mainly product related and not service providers. In order to be able to compare different levels of confusion and environmental dimensions, it would be useful to use

numerous and diverse market situations. In light of this fact and of previous work (Foxall and Yani-de-Soriano, 2011), more similar investigations are required to elucidate such theoretical relationships. The use of a UK sample may be seen as a limitation for the generalisability of the results.

As explained in this paper, behavioral psychology and specifically the BPM treats situations at a holistic level, as such, specific antecedents of each type of reinforcement have not been identified. Although this might restrict the specificity of recommendations to be made (i.e. which elements of the retail situation are specifically responsible for the functional and social reinforcement or confusion?), it offers a focus on the way consumers holistically perceive and receive value from experiences. This can assist with achieving an overall appreciation of the experience. This approach corresponds better to the understanding of customer experience as a holistic customer journey which is not specifically tied down to explicit elements of the environment, the service or the product offered but brings everything together creating the sum of all elements and interactions (Grewal *et al.*, 2009; Lemke *et al.*, 2011; Klaus and Maklan, 2013).

## **6. Conclusion**

This research has dealt with providing a definition of customer retail experience and the inclusion of consumer confusion as a key aversive consequence based on the principles of the BPM (as described by Foxall, 2004; 2013). The integration and extension of confusion took the form of rule-governed behavior. Confusion has been measured and conceptualised specifically as similarity and overload confusion (Walsh and Mitchell, 2010). This study provides theoretical and practical evidence on the implications of examining the retail experience based on its reinforcing and punishing consequences.

Customer experience has been described based on the functional and social reinforcement, behavior setting scope and aversive consequence of retailing. Based on this perspective, approach and avoidance behavior has been found to be determined by functional and social reinforcement along with the aversive consequence of confusion. At the same time, learning history in a market determines the levels of reinforcement and aversive consequences and can help provide elaboration on the way that previous experiences influence subsequent and current ones. The theoretical positioning of this study creates then a basis for the continuing exploration of the ubiquitous concepts of customer experience and consumer confusion.

## References

- Allison, P.D., 2009. Missing data. In E.R. Millsap and A. Maydeu-Olivares (Eds.) *The Sage Handbook of Quantitative Methods in Psychology*. London: Sage Publications, Ltd.
- Anninou, I., Foxall G., Pallister, J., 2015. Consumer confusion: A BPM perspective. In Foxall R.G. (Ed). *Routledge Companion to Consumer Behavior Analysis*, Routledge: Oxon.
- Babin, J.B., Darden, W.R., 1995. Consumers' self-regulation in a retail environment. *Journal of Retailing*, 71 (1), 74–70.
- Baharrel, B., Denison, D.J., 1995. Involvement in a routine food shopping context. *British Food Journal*, 97 (4), 24–29.
- Baker, J., Wakefield, K.L., 2012. How consumer shopping orientation influences perceived crowding, excitement, and stress at the mall. *Journal of the Academy of Marketing Science*, 40 (6), 791–806.
- Balabanis, G., Craven, S., 1997. Consumer confusion from own brand lookalikes: An exploratory investigation. *Journal of Marketing Management*, 13 (4), 299–313.
- Brakus, J.J., Schmitt, B.H., Zarantello, L., 2009. Brand experience: What is it? How is it measured? Does it affect loyalty? *Journal of Marketing*, 73 (3), 52–68.
- Bruhn, M., Georgi, D., Hadwich, K., 2008. Customer equity management as a formative second-order construct. *Journal of Business Research*, 61 (12), 1292–1301.
- Canning, K., 2016. Minimize consumer confusion. Available online: <https://storebrands.com/minimize-consumer-confusion>
- Catania, A.C., 1989. Rules as classes of verbal behavior: A reply to Glenn. *The Analysis of Verbal Behavior*, 7, 49–50.

- Chang, H.J., Eckman, M., Yan, R.N., 2011. Application of the Stimulus-Organism-Response model to the retail environment: the role of hedonic motivation in impulse buying behavior. *The International Review of Retail, Distribution and Consumer Research*, 21 (3), 233–249.
- Chebat, J.C., Michon, R., 2003. Impact of ambient odours on mall shoppers' emotions, cognition, and spending. A test of competitive causal theories. *Journal of Business Research*, 56 (7), 529–539.
- Cheng, A.L.C., Gursoy, D., 2015. A conceptual model of consumers' online tourism confusion. *International Journal of Contemporary Hospitality Management*, 27 (6), 1320–1342.
- Chin W.W., Marcolin, B.L., Newsted, P.R., 2003. A Partial Least Squares latent variable modeling approach for measuring interaction effects: Results from a Monte Carlo simulation study and electronic-mail emotion/ adoption study," *Information Systems Research*, 14 (2), 189–217.
- Spiteri Cornish, L., Moraes, C., 2015. The impact of consumer confusion on nutrition literacy and subsequent dietary behavior. *Psychology and Marketing*, 32 (5), 558–574.
- Davis, L., Wang, S., Lindridge, A., 2008. Culture influences on emotional responses to an online store atmospheric cues. *Journal of Business Research*, 61 (8), 806–812.
- Diamantopoulos, A., Riefler, P., Roth, K.P., 2008. Advancing formative measurement models. *Journal of Business Research*, 61 (12), 1203–1218.
- Donovan, R.J., Rossiter, J.R., 1982. Store atmosphere: An environment psychology approach. *Journal of Retailing*, 58 (Spring), 34–57.
- Driediger, F., Bhatiasevi, V., 2019. Online grocery shopping in Thailand: Consumer acceptance and usage behavior. *Journal of Retailing and Consumer Services*, 48, 224–237.
- Eroglu, S., Machleit K., Davis, L., 2001. Atmospheric qualities of on-line retailing: a conceptual model and implication. *Journal of Business Research*, 54 (2), 177–184.
- Eroglu, S.A., Machleit, K.A., Davis, L.M., 2003. Empirical testing of a model of online store atmospherics and shopper responses. *Psychology and Marketing*, 20 (2), 139–150.
- Finn, A., Wang, L., 2014. Formative vs. reflective measures: Facets of variation. *Journal of Business Research*, 67 (1), 2821–2826.
- Foxall, G.R., 1992. The behavioral perspective model of purchase and consumption: from consumer theory to marketing practice. *Journal of the Academy of Marketing Science*, 20 (2), 189–198.
- Foxall, G.R., 1997. *Marketing Psychology: The Paradigm in the Wings*. London: MacMillan Press LTD.

Foxall, G.R., 1999. The Behavioral Perspective Model: consensibility and consensuality. *European Journal of Marketing*, 33 (5/6), 570–596.

Foxall, G.R., 2013. Intentionality, symbol, and situation in the interpretation of consumer choice. *Marketing Theory*, 13 (1), 105–127.

Foxall, G.R., Greenley, G.E., 1999. Consumers' emotional responses to service environments. *Journal of Business Research*, 46 (2), 149–158.

Foxall, G.R., Greenley, G.E., 2000. Predicating and explaining responses to consumer environments: an empirical test and theoretical extension of the behavioural perspective model. *Service Industries Journal*, 20 (2), 39–63.

Foxall, G.R., Yani-de-Soriano, M.Y., 2005. Situational influences on consumers' attitudes and behavior. *Journal of Business Research*, 58 (4), 518–525.

Foxall, G.R., Yani-de-Soriano, M.Y., 2011. Influence of reinforcement contingencies and cognitive styles on affective responses: An examination of Rolls' theory of emotion in the context of consumer choice. *Journal of Applied Social Psychology*, 41 (10), 2508–2537.

Foxall, G.R., Oliveira-Castro, J.M., James, V.K., Yani-de-Soriano, M.Y., Sigurdsson, V., 2006. Consumer behavior analysis and social marketing: The case of environmental conservation. *Behavior and Social Issues*, 15, 101–124.

Foxman, E.R., Berger, P.W., Cote, J.A., 1992. Consumer brand confusion: A conceptual framework. *Psychology and Marketing*, 9 (2), 123–141.

Garaus, M., Wagner, U., 2016. Retail shopper confusion: Conceptualization, scale development, and consequences. *Journal of Business Research*, 69 (9), 3459–3467.

Glass, S., and Haller, K., 2017. The 2017 Customer Experience Index (CEI) Study. *IBM Institute of Business Value*. Available online:

<https://public.dhe.ibm.com/common/ssi/ecm/gb/en/gbe03798usen/global-business-services-global-business-services-executive-brief-gbe03798usen-20180529.pdf>

Glenn, S.S., 1987. Rules as environmental events. *The Analysis of Verbal Behavior*, 5, 29–32.

Grewal, D., Levy, M., Kumar, V. 2009. Customer experience management in retailing: an organizing framework. *Journal of Retailing*, 85 (1), 1–14.

Grocery Manufacturers' Association, 2017. Grocery industry launches new initiative to reduce consumer confusion on product date labels. Available online: <https://www.gmaonline.org/news-events/newsroom/grocery-industry-launches-new-initiative-to-reduce-consumer-confusion-on-pr/>

Hair, J.F., Ringle, C.M., Sarstedt, M., 2011. PLS-SEM: indeed a silver bullet. *J. Mark. Theory Pract.* 19 (2), 139–152.



Hair, J.F., Sarstedt, M., Ringle, C.M., Mena, J.A., 2012. An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the Academy of Marketing Science*, 40 (3), 414–433.

Hair, J. F., Hollingsworth, C. L., Randolph, A. B., Chong, A.Y.L., 2017. An updated and expanded assessment of PLS-SEM in Information Systems Research. *Industrial Management & Data Systems*, 117 (3), 442–458.

Helkkula, A., Kelleher, C., Pihlström, M., 2012. Characterizing value as an experience: implications for service researchers and managers. *Journal of Service Research*, 15 (1), 59–75.

Jang, S.S., Namkung, Y., 2009. Perceived quality, emotions, and behavioral intentions: Application of an extended Mehrabian–Russell model to restaurants. *Journal of Business Research*, 62 (4), 451–460.

Henseler, J., Ringle, C.M., Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43 (1), 115–135.

Hu, L.T., Bentler, P.M., 1999. Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus new alternatives. *Structural Equation Modeling*, 6 (1), 1–55.

Jeffries, S., 2015. Why too much choice is stressing us out? The Guardian. Available online: <https://www.theguardian.com/lifeandstyle/2015/oct/21/choice-stressing-us-out-dating-partners-monopolies>

Kaas, P.K., 1982. Consumer habit forming, information acquisition, and buying behavior. *Journal of Business Research*, 10 (1), 3–15.

Kim, W.G., Moon, Y.J. 2009. Customers' cognitive, emotional, and actionable response to the servicescape: A test of the moderating effect of the restaurant type. *International Journal of Hospitality Management*, 28, 144–156.

Keiningham, T., Ball, J., Benoit (née Moeller), S., Bruce, H. L., Buoye, A., Dzenkovska, J., Nasr, L., Ou, Y.-C., Zaki, M., 2017. The interplay of customer experience and commitment. *Journal of Services Marketing*, 31 (2), 148–160.

Ketron, S., Spears, N., Dai, B., 2016. Overcoming information overload in retail environments: Imagination and sales promotion in a wine context. *Journal of Retailing and Consumer Services*, 33, 23–32.

Klaus, P., Maklan, S., 2013. Towards a better measure of customer experience. *International Journal of Market Research*, 55 (2), 227–246.

- Kline, R.B., 2015. *Principles and Practice of Structural Equation Modeling*, 4th ed. Guilford publications.
- Kunkel, H.J., 1997. The analysis of rule-governed behavior in social psychology. *Psychological Record*, 47 (4), 698–716.
- Laroche, M., Cleveland, M., Bergeron, J., Goutaland, C., 2003. The knowledge experience-evaluation relationship: A structural equations modelling test of gender differences. *Canadian Journal of Administrative Sciences*, 20 (3), 246–259.
- Lee, B.K., Lee, W.N. 2004. The effect of information overload on consumer choice quality in an online environment. *Psychology and Marketing*, 21 (3), 159–183.
- Lee, S., Ha, S., Widdows, R. 2011. Consumer responses to high technology products: Product attributes, cognitions and emotions. *Journal of Business Research*, 64, 1195–1200.
- Lee, Y.K., Lee, C.K., Lee, S.K., Babin, B.J., 2008. Festivalscapes and patrons' emotions, satisfaction and loyalty. *Journal of Business Research*, 61 (1), 56–64.
- Lemke, F., Clark, M., Wilson, H., 2011. Customer experience quality: an exploration in business and consumer contexts using Repertory Grid Technique. *Journal of the Academy of Marketing Science*, 39 (6), 846–869.
- Lemon, K.N., Verhoef, P.C., 2016. Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80 (60), 69–96.
- Lu, A.C.C., Gursoy, D., Lu, R.Y.C., 2016. Antecedents and outcomes of consumers' confusion in the online tourism domain. *Annals of Tourism Research*, 57, 76–93.
- Lutz, R.J., Kakkar, P., 1975. The psychological situation as a determinant of consumer behavior. *Advances in Consumer Research*, 2, 439–453.
- Massara, F., Liu, S.S., Melara, R.D. 2010. Adapting to a retail environment: Modelling consumer-environment interactions. *Journal of Business Research*, 63 (7), 673–681.
- Mattila, A.S., Wirtz, J. 2001. Congruency of scent and music as a driver of in-store evaluations and behavior, *Journal of Retailing*, 77 (2), 273–289.
- McKinsey&Company, 2016. Customer experience: Creating value through transforming customer journeys. Available online: <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/customer-experience-creating-value-through-transforming-customer-journeys>
- Mehrabian, A., Russell, J.A., 1974. *An approach to environmental psychology*. Cambridge, MA, MIT Press.
- Miceli, G., Pieters, R., 2010. Looking more or less alike: Determinants of perceived visual similarity between copycat and leading brands. *Journal of Business Research*, 63 (11), 1121–1128.

Mintel, 2016. Supermarkets- UK. Attitudes towards pricing and promotions. Report [Accessed 28.11.2018].

Mitchell, V.-W., Giles, A., 2010. Counteracting consumer confusion. Critical Eye. The Network of Leaders. Available online: <https://www.criticaleye.com/inspiring/insights-servfile.cfm?id=1873>

Mitchell, V.-W., Walsh, G., Yamin, M., 2005. Towards a conceptual model of consumer confusion. *Advances in Consumer Research*, 32 (1), 143–150.

Morrison, M., Gan, S., Dubelaar, C., Oppewal, H., 2011. In store music and aroma influences on shopper behavior and satisfaction. *Journal of Business Research*, 64 (6), 558–564.

Office for National Statistics (ONS), 2017. Retail sales, Great Britain: January 2017. Available online:

<https://www.ons.gov.uk/businessindustryandtrade/retailindustry/bulletins/retailsales/jan2017>

Parasuraman, A., Colby, C.L., 2001. *Techno-ready marketing: How and why your customers adopt technology*. New York, The Free Press.

Penz, E., Hogg, M.K., 2011. Investigating ambivalence in consumers' experiences of approach-avoidance conflicts in online and offline settings. *European Journal of Marketing*, 45 (1/2), 104–132.

Plutchik, R., 1980. *Emotion: a psychoevolutionary synthesis*. New York, Harper and Row.

Richard, M., Chebat, J., 2016. Modeling online consumer behavior. Preeminence of emotions and moderating influences of need for cognition and optimal stimulation level. *Journal of Business Research*, 69 (2), 541–553.

Richins, M.L., 1997. Measuring emotions in the consumption experience. *Journal of Consumer Research*, 24 (2), 127–146.

Rose, S., Clark, M., Samouel, P., Hair, N., 2012. Online customer experience in e-retailing: an empirical model of antecedents and outcomes. *Journal of Retailing*, 88 (2), 308–322.

Rotter, J.B., 1966. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs General and Applied*, 80 (1), 1–28.

Rozin, P., Cohen, B.A., 2003. High frequency of facial expression corresponding to confusion, concentration and worry in an analysis of naturally occurring facial expressions of Americans. *Emotion*, 3 (1), 68–75.

Russell, J.A., Pratt, G., 1980. A description of the affective quality attributed to environments. *Journal of Personality and Social Psychology*, 38 (2), 311–322.

Schmidt, R., 2016. Frozen. Using behavioral design to overcome decision-making paralysis. *Deloitte Insights*. Available online: <https://www2.deloitte.com/insights/us/en/focus/behavioral-economics/overcoming-decision-making-paralysis.html>

Sigurdsson, V., Foxall, G.R., Saevarsson, H., 2010. In-store experimental approach to pricing and consumer behavior. *Journal of Organizational Behavior Management*, 30 (3), 234–246.

Shankar, V., Inman, J.J., Mantrala, M., Kelley, E., Rizley, R., 2011. Innovations in shopper marketing: current insights and future research issues. 87S (1), S29–S42.

Skinner, B.F., 1966. An operant analysis of problem-solving. In B. Kleinmuntz (Ed.), *Problem solving: Research, method, teaching* (pp. 225–257). New York: Wiley.

Sproles, G.B., Kendall, E., 1986. A methodology for profiling consumers' decision-making style. *Journal of Consumer Affairs*, 20 (2), 267–279.

Schweizer, M., 2004. *Consumer confusion im handel—Ein umweltpsychologisches erklärungsmodell*. St. Gallen: Rosch-Buch, Stresslitz.

Schweizer, M., Kotouc, A. J., Wagner, T., 2006. Scale development for consumer confusion. *Advances in Consumer Research*, 33 (1), 184–190.

Terblanche, N.S., 2018. Revisiting the super-market in store customer shopping experience. *Journal of Retailing and Consumer Services*, 40, 48–59.

Thomas, M., Morwitz, V., 2005. Penny wise and pound foolish: The left-digit effect in price cognition. *Journal of Consumer Research*, 32 (1), 54–64.

Törneke, N., Luciano, C., Salas, S.V., 2008. Rule- governed behavior and psychological problems. *International Journal of Psychology and Psychological Therapy*, 8 (2), 141–156.

Urbach, N., Ahlemann, F., 2010. Structural equation modeling in information systems research using partial least squares. *Journal of Information Technology Theory and Application*, 11 (2), 5-40.

Verhoef, P.C., Lemon, K.N., Parasuraman, A., Roggeveen, A., Tsiros, M., Schlesinger, L.A., 2009. Customer experience creation: determinants, dynamics and management strategies. *Journal of Retailing*, 85 (1), 31–41.

Vieira, V.A., 2013. Stimuli-organism-response framework: A meta-analytic review in the store environment. *Journal of Business Research*, 66 (9), 1420–1426.

Walsh, G., Mitchell, V.-W., 2010. The effect of consumer confusion proneness on word of mouth, trust, and consumer satisfaction. *European Journal of Marketing*, 44 (6), 838–859.

Walsh, G., Hennig-Thurau, T., Mitchell, V.-W., 2007. Consumer confusion proneness: Scale development, validation, and application. *Journal of Marketing Management*, 23 (7/8), 697–721.

Walsh, G., Shiu, E., Hassan, L.M., Michaelidou, N., Beatty, S.E., 2011. Emotions, store environmental cues, store-choice criteria, and marketing outcomes. *Journal of Business Research*, 64 (7), 737–744.

Walsh, G., Lindridge, A., Mitchell, V. W., Deseniss, A., Lippold, A., 2017. Investigating consumer confusion proneness cross-culturally: empirical evidence from the USA, Germany, and Thailand. *International Journal of Markets and Business Systems (IJMABS)*, 2 (3).

Wang, J.Y., Minor, S.M., Wei, J., 2011. Aesthetics and the online shopping environment: Understanding consumer responses. *Journal of Retailing*, 87 (1), 46–58.

Webber, R., 2017. Why the confusion of the cell phone market has caused millions to switch. *Forbes (CommunityVoice)*. Available at:

<https://www.forbes.com/sites/carminegallos/2013/04/30/successful-retailers-learn-that-fewer-choices-lead-to-higher-sales/#59d24250176a>

Wood, Z., Butler, S., 2015. Tesco cuts range by 30% to simplify shopping. *The Guardian*, Available online: <https://www.theguardian.com/business/2015/jan/30/tesco-cuts-range-products>

Yani-de-Soriano, M.Y., Foxall, G.R., 2006. The emotional power of place: The fall and rise of dominance in retail research. *Journal of Retailing and Consumer Services*, 13, 403–416.

Yani-de-Soriano, M.Y., Foxall, G.R., Newman, A.J., 2013. The impact of the interaction of utilitarian and informational reinforcement and behavior setting scope on consumer response. *Psychology & Marketing*, 30 (2), 148–159.

Zettle R.D., Hayes S.C., 1982. Rule-governed behavior: A potential theoretical framework for cognitive behavioral therapy. *Advances in Cognitive-Behavioral Research and Therapy*, 1, 73–117.

## Appendix 1

Appendix table: Construct measurement and type

Construct	Measurement	Type
Pleasure (P)	P1 Happy...Unhappy (reversed) P2 Annoyed...Pleased P3 Relaxed...Bored (reversed) P4 Satisfied...Unsatisfied (reversed) P5 Melancholic...Contented P6 Despairing...Hopeful	Reflective

Arousal (A)	A1 Calm...Excited (removed after measurement model assessment) A2 Frenzied...Sluggish (reversed/ removed after measurement model assessment) A3 Dull...Jittery A4 Aroused...Unaroused (reversed) A5 Stimulated...Relaxed (reversed) A6 Sleepy...Wide awake	Reflective
Dominance (D)	D1 Autonomous...Guided (reversed/ removed after measurement model assessment) D2 Awed...Important D3 Controlling...Controlled (reversed) D4 Influenced...Influential (removed after measurement model assessment) D5 In control...Cared for (reversed) D6 Submissive...Dominant	Reflective
Similarity Confusion (SC)	SC1 Some grocery products are so similar that it is often difficult to spot new products. SC2 Some grocery products look so similar that it is difficult to detect differences. SC3 Most products in a grocery store are very similar and are therefore hard to distinguish. SC4 Some grocery products look so similar that I don't know if they are made by the same manufacturer.	Reflective
Overload Confusion (OC)	OC1 The more I learn about grocery products, the harder it gets to choose the best. OC2 There are so many grocery brands to choose from that I sometimes feel confused. OC3 All the information I get on different grocery products confuses me. OC4 To me there are too many products to choose from in a grocery store.	Reflective
Approach (AP)	AP1 How much time would you like to spend on each grocery shopping trip? AP2 Once in a grocery store, how much would you enjoy exploring around? AP3 To what extent is grocery shopping a situation in which you would feel friendly and talkative to a stranger who happens to be near you?	Formative
Avoidance (AV)	AV1 How much would you try to get out of or avoid doing your shopping for groceries? AV2 How much would you try to avoid any looking around or exploring in a grocery store? AV3 Is grocery shopping a situation in which you might try to avoid other people, avoid having to talk to them?	Formative