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SERVICESCAPES: A REVIEW OF CONTEMPORARY EMPIRICAL RESEARCH

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Servicescape: A Review of Contemporary Empirical Research

ABSTRACT

This paper reviews forty three extant contemporary empirical servicescape studies conducted in the area. The review is limited to articles which focus on the servicescape as defined by Bitner (1992) and Mehrabian and Russell (1974) Pleasure, Arousal and Dominance (PAD) dimensions from environmental psychology. The publication time frame covers the period from 1980 to 2007. The review observes key patterns and trends within the literature. The content was analysed on the basis of issues such as research variables, methodological approaches, sampling methods, research origin and the theoretical frameworks underpinning the research. The analysis highlights gaps and further research directions that could be taken. These research opportunities include the expansion of research sites to address the paucity of European research which has been fragmentary in nature to date while simultaneously reflecting on the research design and implementation issues highlighted.

INTRODUCTION

The influence of the environment on behaviour has long been acknowledged by retailers, architects and interior designers (Baker et al., 1992; Tai and Fung, 1997; Gilboa and Rafaeli, 2003). There has been mounting evidence over the years that environmental variables can substantially influence consumer behaviour and emotions in physical environments (Mehrabian and Russell 1974; Donovan and Rossiter 1982; Turley and Milliman 2000). During the last few decades, the importance of the environment has become prominent in the study of service environments, with researchers beginning to study the influence of the store environment on consumers' behaviour (Gilboa and Rafaeli, 2003). The majority of this work has focussed on the effects of the physical attributes of the customers' external environment, or as Kotler (1974) referred to it as 'atmospherics'.

According to Kotler (1974) atmospherics is the term used for the intentional control and manipulation of environmental cues in the service environment. Bitner (1992) concurred with Kotler (1974) and coined the term 'servicescapes' in reference to the physical surroundings fashioned by retailers to facilitate the service offering to consumers. It is acknowledged that the service environment is made up of both tangible (buildings and furniture) and intangible (temperature, colour, scent and music) elements which make up the service experience (Hoffman and Turley, 2002). Gulus and Bloch (1995, p 95) noted that 'millions of dollars are spent by retailers each year on special lighting, background music, carpeting and fixtures, all with the hope of creating an atmosphere that is conducive to retail success'.

Though the effect of servicescape elements on customers is widely-recognised, there remains a surprising lack of empirical findings addressing its role in consumption settings (Chebat et al., 2001; Babin et al., 2003). The need for further research has been called for repeatedly over the years. It was Kotler (1974, p 64) who first indicated the need 'for further research into the subject of optimal atmosphere'. In more recent times Spangenberg et al., (2005, p 1583) point out that 'although environmental stimuli have been found to influence shopping behaviour, empirical knowledge of how these variables interact to affect shopper perceptions and actions is lacking'.

The aim of this paper is to supply an extensive review of contemporary empirical literature in the area of servicescapes with a view to assessing the current state of knowledge in this area. A key objective in this review is the identification of research gaps and possible future research directions. The paper proceeds with the review method taken. In total forty three studies were included and the salient aspects of these studies are reviewed and the key research findings across the literature are presented. The studies identified were analysed looking at issues such as origin of research, sample size and other methodological approaches employed in order to identify patterns across these and other relevant dimensions.

REVIEW METHOD

Service environments are becoming more complex and there is a desperate need to understand the effects of service environments on consumer's behaviour. Turley and Milliman (2000, p 208) emphasised the need for additional theoretical development 'review of the literature indicates that atmospheric effects exist, but there has not been enough effort devoted to explaining, predicting, and controlling the behaviour of consumers'. This review is limited to published articles only, with relevant studies identified through electronic sources (Business Source Premier, Emerald Fulltext, IngentaConnect, Swetswise, Sage publications and Science Direct Journals). The publication time frame covers from the period from 1980 to 2007. To be eligible for review, the studies had to be, published empirical studies, focused on Bitner's (1992) servicescape elements and Mehrabian and Russell's (1974) model of environmental psychology.

Given the above, this review excludes conceptual papers on services environments such as Bitner's (1992), Bones and Ellen's (1999), Oakes' (2000) and Hoffman and Turley's (2002) theoretical articles. In addition Turley and Milliman's (2000), Tombs and McColl-Kennedy's (2003) and Ezeh and Harris (2007) review papers are excluded. Papers focussing on online servicescapes have also been excluded, e.g Eroglu et al. (2001, 2003), McKinney, (2004) Mummalaneni (2005), Vilnai-Yavetz and Rafaeli (2006), Kim et al. (2007). This is because an additional paper focussing on online servicescapes is currently being developed by the author. In all, forty three articles were included for final review. Each article was content-analysed to identify the, theoretical framework used for conceptual analysis, research variables, methodological approaches (including data collection method, sample size), nature of the research and country of origin

The first two issues relate directly to the purpose of examining empirical findings in the servicescape literature. The last three are of interest in understanding the methodological approaches and context of the research and provide insight to the current state of knowledge of the servicescape literature.

DISCUSSION OF THE FINDINGS

At a general level all forty three studies eligible for review were published in the period 1980-2007. Eight of which were published before 1990. The majority of these eight studies were from North America, (Russell, 1980; Donovan and Rossiter 1982; Milliman, 1982; Bellizzi et al., 1983; Milliman, 1986), with one from Australia (Amato and McInnes, 1983). At this time there was a mixture of research done, self report (Russell, 1980), descriptive (Donovan and Rossiter, 1982), laboratory experiments (Bellizzi et al., 1983) but with the majority of research being field research (Milliman, 1982, 1984; Amato and McInnes, 1983). Though there was research conducted in the area of servicescapes between 1986 and 1991, such as Bateson and Hui's (1987) research on crowding, Bawa et al.'s (1989) research on brand loyalty with store type and Iyer's (1989) research on unplanned purchasing, there were only two studies, Yalch and Spangenberg's (1988, 1990), that looked at Bitner's (1992) ambient factor of music and Mehrabian and Russell's (1974) environmental psychology literature. These studies were both conducted in North America and were field research studies.

Of the research carried out before 1990, half of the studies looked at Bitner's (1992) variable of music (Milliman 1982, 1986; Yalch and Spangenberg 1988, 1990), one study looked at the variable of colour (Bellizzi et al., 1983) and the other studies concentrated on elements of Mehrabian and Russell's (1974) environmental psychology (Russell, 1980; Donovan and Rossiter, 1982; Amato and McInnes, 1983). One justification for the lack of studies before the 1990's could have been the lack of knowledge of the effects of environmental stimuli. Yalch and Spangenberg (1988, p 106) noted that 'published research studying atmospheric factors is limited, with music being one of the few factors studied repeatedly'. In further research Yalch and Spangenberg (1990, p 31) indicated that 'little is known about how atmospheres affect consumers'. Yalch and Spangenberg (1990, p 37) called for 'more research in the area' and between 1991 and 1999 there were sixteen articles published.

The majority of the studies during this time were from North America (Baker et al., 1992; Bellizzi and Hite, 1992; Kelleris and Kent, 1992; Yalch and Spangenberg, 1993; Gulus and Schewe, 1994; Wakefield and Blodgett, 1994; Dubé et al., 1995; Herrington and Capella, 1996, Spangenberg et al., 1996; Wakefield and Blodgett, 1996). Four were carried out in Europe (Hui and Bateson, 1991; Kenhove and Desrumaux, 1997; Spies et al., 1997; Foxall and Greenley, 1999), one in Australia (Donovan et al., 1994) and one in Hong Kong (Tai and Fung; 1997).

During this time period there were more field experiments or field studies conducted (Yalch and Spangenberg, 1993; Donovan et al., 1994; Gulus and Schewe, 1994; Herrington and Capella, 1996; Wakefield and Blodgett, 1996; Kenhove and Desrumaux, 1997; Spies et al., 1997; Tai and Fung, 1997; Foxall and Greenley, 1999), than laboratory experiments (Hui and Bateson, 1991; Baker et al., 1992; Bellizzi and Hite, 1992; Kelleris and Kent, 1992; Wakefield and Blodgett, 1994; Dubé et al., 1995; Spangenberg et al., 1996). Similar to research carried out before 1990, the majority of the research between 1990 and 1999 looked at Bitner's (1992) variable of music (Kelleris and Kent, 1992; Yalch and Spangenberg, 1993; Gulus and Schewe, 1994; Dubé et al., 1995; Herrington and Capella, 1996). One of the studies concentrated on olfaction (Spangenberg et al., 1996), one on colour (Bellizzi and Hite, 1992) and one study combined two elements of Bitner's (1992) ambient variables, colour and lighting (Spies et al., 1997).

Other studies during this time concentrated on elements of Mehrabian and Russell's (1984) environmental psychology (Hui and Bateson, 1991; Baker et al., 1992; Donovan et al., 1994; Wakefield and Blodgett, 1994, 1996; Kenhove and Desrumaux, 1997; Tai and Fung, 1997; Foxall and Greenley, 1999). Foxall and Greenley's (1999) research was the first research to illustrate the importance of the dominance dimension. They noted (p 150) that 'dominance has made a poor showing in investigations of the role of emotional mediators of consumer and other human behaviour'. Their study led the way for more research being carried out on the dimension of dominance (Yalch and Spangenberg 2000). However as Gilboa and Rafaeli (2003, p 198) indicated 'the role of dominance in relation to approach-avoidance behaviours remains unclear and has received attention in very few studies'.

Since 2000 nineteen studies have been published. The vast majority of the studies have emerged from North America (Machleit and Eroglu, 2000; Yalch and Spangenberg, 2000; Chebat et al., 2001; Dubé and Morin, 2001; Mattila and Wirtz, 2001; Summers and Herbert, 2001; Hightower et al., 2002; Chebat and Michon, 2003; Babin et al., 2003; Spangenberg et al., 2005; Mattila and Wirtz, 2006; Spangenberg et al., 2006; Chebat and Morin, 2007). A few have emerged from Europe (Reimer and Kuehn, 2004; Bigne et al., 2005; Newman, 2007), one from Australia (Sweeney and Wyber, 2002), one from Israel (Gilboa and Rafaeli, 2003) and one from Singapore (Wirtz et al., 2000).

In terms of the type of research conducted, there is almost a fifty-fifty divide between field experiments (Machleit and Eroglu, 2000; Dubé and Morin, 2001; Mattila and Wirtz, 2001; Hightower et al., 2002; Chebat and Michon, 2003; Reimer and Kuehn, 2004; Bigne et al., 2005; Spangenberg et al., 2006; Chebat and Morin, 2007; Newman 2007) and laboratory experiments (Wirtz et al., 2000; Yalch and Spangenberg, 2000; Chebat et al., 2001; Summers and Herbert, 2001; Sweeney and Wyber, 2002; Gilboa and Rafaeli, 2003; Babin et al., 2003; Spangenberg et al., 2005; Mattila and Wirtz, 2006). Interesting to note is that Spangenberg et al. (2005) and (2006) took a different approach in both their studies even though both studies looked at olfaction. Spangenberg et al., (2006, p 1281) noted that ‘prior research does not document (such) congruent effects for products without an inherent scent and in real-world settings’.

Research into the area of olfaction and its effects has received more attention since Bone and Ellen’s (1999) theoretical study and their olfaction model (Mattila and Wirtz, 2001; Chebat and Michon 2003; Spangenberg et al., 2005, 2006). However, studies looking at the variable of music are still at the forefront of Bitner’s (1992) ambient variables being researched (Yalch and Spangenberg, 2000; Chebat et al., 2001; Dubé and Morin, 2001; Mattila and Wirtz, 2001; Sweeney and Wyber, 2002; Spangenberg et al., 2005). Other variables that have been given some attention in recent years are colour (Chebat and Morin, 2007) and lighting (Summers and Herbert, 2001). Similarly to Spies et al. (1997), Babin et al. (2003) researched colour and lighting together.

Other studies during this time concentrated on Mehrabian and Russell's (1974) environmental psychology (Machleit and Eroglu, 2000; Wirtz et al., 2000; Hightower et al., 2002; Gilboa and Rafaeli, 2003; Reimer and Kuehn, 2004; Bigne et al., 2005, Mattila and Wirtz, 2006; Newman, 2007). Wirtz et al. (2000) and Wirtz and Mattila (2006) suggested a new variable called "Target-Arousal level" could be very important in understanding the role that Mehrabian and Russell's (1974) model plays and in which situations it is useful. Mattilla and Wirtz (2006) research demonstrated that an attractive store might be perceived as unpleasant or pleasant depending on whether the environment matches the customers desired Target-Arousal level. Their research along with Foxall and Greenley's (1999) research demonstrates the need for further research into each of Mehrabian and Russell's (1974) three dimensions, pleasure, arousal and dominance.

In recent years services are fast becoming an essential component in day to day life due to the 'time poor cash rich' lifestyle. Research in the past decade indicates the growing interest in the area of services and the growing importance of investigating service environments. Ezeh and Harris (2007, p 73) called for 'more empirical research into this phenomenon' and Chebat and Morin (2007, p 195) indicated that 'examining these issues [music, colour, lighting, etc] would provide a more solid theoretical foundation for management decision -making'.

Overall the vast majority of studies have come from North America and Europe is far behind in the amount of research done in the area as are other parts of the world. More than half of the studies have used field research and music is the most commonly researched ambient variable. To understand in detail and to assess the current state of knowledge in this area, patterns related to the theoretical frameworks and research dimensions/variables of the review articles are presented and discussed. This is followed by a discussion of the patterns identified by methodological issues, country of origin, data collection and sampling size. Finally, future research considerations and opportunities are presented.

THE THEORETICAL FRAMEWORKS UNDERPINNING THE RESEARCH

Various frameworks have been applied in the study of service environments, Mehrabian and Russell's (1974) model, Lazarus (1991) cognitive theory, and Bitner's (1992) model. To date the most common theoretical framework underpinning research output is that of Mehrabian and Russell's (1974) environmental psychology model and Bitner's (1992) Servicescape model. The Mehrabian and Russell (1974) model takes the emotion-cognition approach and Lazarus (1991) cognition theory of emotion takes the cognition-emotion school of thought (Chebat and Michon, 2003; Bigne et al., 2005). Lin (2004) indicates that over the years researches have argued for both sides, on the one hand that the cognitive state precedes emotional states and on the other hand emotional states precede cognitive states. Lazarus (1991) cognitive theory of emotion has been indirectly supported by Tai and Fung (1997, p 335) who suggested 'it is clear that in-store environmental stimuli affect shoppers' behaviour as well as their affective states. However, on the other side of the coin, the three components are actually affecting one another'. Lazarus (1991) suggests that while cognition does not automatically lead to emotion, emotion can not occur without cognition.

Chebat and Michon (2003) and Bigne et al. (2005) compared the two models of thought. Chebat and Michon (2003) indicate that within the literature of service environments the Mehrabian and Russell (1974) approach-avoidance model has strongly stressed the emotional effects; however they found support for Lazarus (1991) cognition theory of emotion. Bigne et al. (2005) supports Mehrabian and Russell's (1974) model, however they found that Lazarus (1991) cognitive theory of emotion better explains the effect of pleasure on satisfaction and loyalty. Bigne et al. (2005, p 842) called for more research into the area and noted that 'the findings had to be considered within the limitations of the research'.

Mehrabian and Russell's (1974) Model

The seminal work of Mehrabian and Russell (1974) posited that the environmental stimuli have a direct effect on the approach and avoidance behaviours of participants in that environment. The Mehrabian and Russell (1974) model is based on the Stimulus-Organism-Response (S-O-R) paradigm. See figure 1.1. The (S) component is the environmental stimulus; the (O) component is the emotional states and the (R) component is the approach-avoidance responses. The (S) component identifies that specific stimuli are said to affect the emotional states of pleasure and arousal, the (O) component, which in turn affects the (R) component, the approach-avoidance behaviours (Aubert-Gamet 1996). For a more comprehensive review see Mehrabian and Russell (1974).

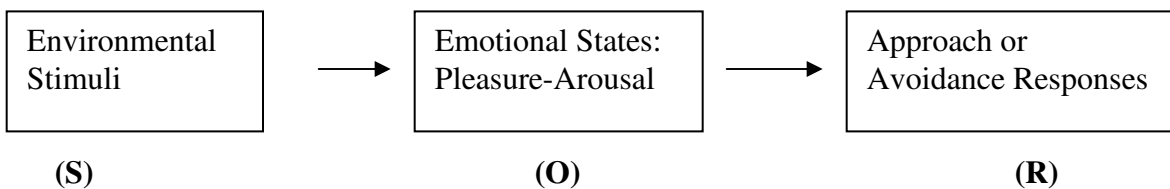


Figure 1.1 Mehrabian and Russell Model

Source Mehrabian and Russell (1974, p 8) revised format from Tai and Fung (1997, p 315)

This widely referenced S-O-R model proposes that servicescape stimuli affect emotional states of consumers and thus leads to approach-avoidance responses. The relationship is confirmed in extensive literature (Donovan and Rossiter, 1982; Wirtz et al., 2000; Newman, 2007). As noted by Ezeh and Harris (2007, p 62) 'these studies confirm the very widely held stance, (spanning several decades), that customers do indeed respond to servicescapes stimuli'. Their behavioural responses can be classified as either approach or avoidance (Mehrabian and Russell, 1974).

Yalch and Spangenberg (2000, p 140) suggest that 'approach-avoidance behaviours can be grouped into four categories based on the type of behaviour: time, exploration, communication, and satisfaction'. Mehrabian and Russell (1974), Mehrabian (1976), Donovan and Rossiter (1982), Bitner (1992) and Hoffman and Turley (2002) have all classified these responses in the following manner.

1. A desire *physically* to stay in (approach) or to get out of (avoid) the environment.
2. A desire or willingness to *explore* or look around the environment (approach) or a tendency to remain inanimate in the environment (avoid) and not interact with it.
3. A desire or willingness to *communicate* with others in the environment (approach) as opposed to a tendency to avoid or ignore communication attempts from others (avoid).
4. The degree of enhancement (approach) or hindrance (avoid) of *performance and satisfaction* with the task performers.

Kotler (1974) suggested that since the displayed approach or avoidance behaviours of customers are influenced by customers perceptions of the servicescape stimuli, the servicescape can be controlled and designed to attract the targeted cliental (Shostack, 1977). Similarly servicescapes can be designed to discourage unsought cliental from approaching the servicescape (Bitner, 1992; Ezeh and Harris, 2007). Much of the work in the servicescape literature area stems from the field of environmental psychology. Mehrabian and Russell's (1974) S-O-R model founded the basis of the Bitner's (1992) servicescape model.

Servicescape Framework

Over the years there have been many definitions of what servicescapes are, Kotler (1974, p 50) suggested that it is ‘the design of buying environments to produce emotional effects in the buyer that enhance his or her purchase probability’, Bitner (1992, p 65) indicate that ‘all of the objective physical factors that can be controlled by the firm to enhance (or constrain) employee and customer actions’ and Bitner and Zeithaml (2003, p 25) noted ‘it is any tangible component that facilitates performance or communicates the service’. Tombs and McColl-Kennedy (2003, p 450) indicated that ‘one of the most widely cited typologies of the service encounter, and its effects on those within it, is Bitner’s (1992) servicescapes’.

The physical environment where a service is delivered and experienced by the customer plays an important part in the formation of the perceptions of the customer and their future expectations about services of that nature (Bitner, 1992; Baker et al., 2002; Grewal et al., 2003). Since the servicescape was formed there has been wide use of the model in assessing, evaluating and understanding store environments and their atmospheres (Kelleris and Kent, 1992; Yalch and Spangenberg, 1993; Gulus and Schewe, 1994; Wakefield and Blodgett, 1994, 1996; Spies et al., 1997; Turley and Milliman, 2000; Hightower et al., 2002; Reimer and Kuehn, 2004; Newman, 2007). Hoffman and Turley (2002) noted that much can be gained by examining the servicescape model because of the intangible nature of services.

RESEARCH DIMENSIONS AND VARIABLES

PAD Dimensions

Mehrabian and Russell (1974) stated that the measures of PAD dimensions adequately capture the emotional context of servicescapes. It was Donovan and Rossiter (1982) who first applied the Mehrabian and Russell (1974) PAD dimensions to the study of store atmosphere. Their study made a major contribution to the literature by establishing the validity of the relationship between store environments, emotional states, and behavioural intentions. Amato and McInnes (1983), Yalch and Spangenberg (1988, 1990), Bellizzi and Hite (1992) and Baker et al. (1992) studies hoped to refine and extend the work of Donovan and Rossiter (1982) study. However Donovan et al. (1994, p 284) indicated that 'none of the studies has strictly followed the methodology and analysis of the M-R model as proposed by Donovan and Rossiter (1982)'. Donovan et al (1994) indicated that in its modified form, where the dominance dimension is taken out, that the Mehrabian and Russell (1974) model is useful for the study of store behaviour.

Within extant research, dominance emerges as the under researched dimension. Some authors indicated that dominance was not a beneficial dimension (Russell, 1980; Donovan and Rossiter, 1982; Amato and McInnes, 1983; Baker et al., 1992; Donovan et al., 1994; Dubé et al., 1995; Kenhove and Desrumaux, 1997). The reasoning behind not considering the dimension as important in their research could stem from Mehrabian and Russell (1974) themselves who did not stress the importance of the dimension.

Foxall and Greenley (1999) point out that the failure to find a role for dominance might be due to the narrow range of customer settings used in past studies. They noted that researchers have generated settings on a random convenience basis, for example using student samples (Donovan and Rossiter, 1982; Baker et al., 1992; Bellizzi and Hite, 1992; Kelleris and Kent, 1992; Wakefield and Blodgett, 1994; Dubé et al., 1995; Spangenberg et al., 1996; Wirtz et al., 2000; Yalch and Spangenberg, 2000; Chebat et al., 2001; Sweeney and Wyber, 2002; Gilboa and Rafaeli, 2003; Mattila and Wirtz, 2006) and also had focussed on retail settings (Yalch and Spangenberg, 1988, 1990, 1993; Kenhove and Desrumaux, 1997; Tai and Fung, 1997; Dubé and Morin, 2001; Mattila and Wirtz, 2001; Chebat and Michon, 2003; Spangenberg et al., 2006; Chebat and Morin, 2007).

Sweeney and Wyber (2002) note that dominance is not as commonly used as pleasure and arousal are in empirical studies. Since Foxall and Greenley's (1999) study some have found the dimension of dominance to be of significance (Yalch and Spangenberg, 2000; Machleit and Eroglu, 2000; Gilboa and Rafaeli, 2003; Newman, 2007). With more services available to the consumer and more of these research settings being examined, for example banks, casinos, football/baseball games, airports, restaurants and theme-parks (Wakefield and Blodgett, 1996; Foxall and Greenley, 1999; Hightower et al., 2002; Reimer and Kuehn, 2004; Bigne et al., 2005; Newman 2007), the role of dominance may play a larger role today that it has done in the past. Machleit and Eroglu (2000) indicated that the dominance dimension is appropriate for use in studies on elements such as retail crowding and waiting time, where personal control of the servicescape is deemed to be significant.

Mehrabian and Russell (1974) and Russell (1980) indicated that any environment will produce an emotional state that can be characterised between the two emotional dimensions of pleasure and arousal. To date the majority of the studies have focussed on the pleasure and arousal dimensions and not on dominance (Russell, 1980; Donovan and Rossiter, 1982; Amato and McInnes, 1983; Baker et al., 1992; Donovan et al., 1994; Dubé et al., 1995; Kenhove and Desrumaux, 1997; Tai and Fung, 1997; Chebat and Michon, 2003; Gilboa and Rafaeli, 2003; Bigné et al., 2005; Newman, 2007).

Over the years there has been support for both dimensions, however some contradictions have occurred. In their research, Donovan et al. (1994, p 289) noted that 'arousal was not significant in pleasant environment'; this did not replicate Donovan and Rossiter (1982) study. This is interesting and indicates further empirical research is essential because Donovan and Rossiter (1982) study found support for the first and not the second hypothesis of Mehrabian and Russell (1974) model. A few reasons for the contradiction could have been due to the sample size or type of research conducted. Donovan et al. (1994) research used twice as many respondents as Donovan and Rossiter (1982) and used a field study approach where as Donovan and Rossiter (1982) used a descriptive analysis.

Kenhove and Desrumaux (1997) compared their results with Donovan and Rossiter (1982) and Donovan et al. (1994) studies. Overall their results supported previous research that the Organism-Response part of the Mehrabian and Russell (1974) model is useful in a retail setting. In supporting previous research and adding to it, Kenhove and Desrumaux (1997, p 364) stressed that ‘both pleasure and arousal induced by the store environment are strong predictors of behavioural intentions.’ Past research, Donovan and Rossiter (1982) and Donovan et al (1994) and had only stressed the importance of pleasure. Tai and Fung (1997) results reinforce conclusions made by Donovan and Rossiter (1982), Donovan et al. (1994) and Kenhove and Desrumaux (1997). Tai and Fung (1997, p 331) noted that ‘the interaction between pleasure and arousal is partly confirmed by the study’.

As much as Kenhove and Desrumaux (1997) and Dubé et al (1995) supported the model they also criticised and contradicted it. Kenhove and Desrumaux (1997, p 363) indicated that ‘an attempt to dampen arousal in an unpleasant store environment will create more avoidance behaviour intentions’. Dubé et al. (1995) results showed that high pleasure music enhances the desire to affiliate at the two extremes of the arousal dimension; this disagrees with Mehrabian and Russell (1974) model. Dubé et al. (1995) note that the behaviour could be due to fact that in a commercial setting customers’ will approach service staff in order to reduce their anxiety. However Dubé et al. (1995) did agree with Mehrabian and Russell (1974) model that higher desire to affiliate is associated with increasing levels of arousal.

Wirtz et al. (2000) and Mattila and Wirtz (2006) suggested a new variable called “Target-Arousal level” could be very important in understanding the role the model plays. Over the years authors have agreed and disagreed with Mehrabian and Russell’s (1974) hypotheses but had not specified if the situation had been ‘high’ or ‘low’ target-arousal (Donovan and Rossiter, 1982; Amato and McInnes, 1983; Baker et al., 1992; Donovan et al., 1994; Dubé et al., 1995; Kenhove and Desrumaux, 1997; Tai and Fung, 1997; Chebat and Michon, 2003; Gilboa and Rafaeli, 2003; Bigné et al., 2005). Wirtz et al. (2000) and Mattila and Wirtz (2006) extended research on the arousal dimension and indicated that in order to “bridge the gap” in the literature the concept of “Target Arousal” would be beneficial in understanding the Mehrabian and Russell (1974) model.

Servicescape Variables

Kotler (1974, p 50) identifies that within the literature there is 'growing recognition that store interiors and exteriors can be designed to create specific feelings in shoppers that can have an important effect on purchase'. Although usually below the consciousness of customers, ambient factors can affect customer evaluation of the services experience and lead to the exhibition of either approach or avoidance behaviour (Mattila and Wirtz, 2001).

Ambient condition is the first dimension in Bitner's (1992) framework. The ambient conditions are background features such as temperature, air quality, noise, music, lighting and olfaction (Bitner 1992). Yalch and Spangenberg (1990, p 32) noted that 'music is one of the most frequently used atmospheric factors to enhance the delivery of services to customers'. To date the main research variable has been music (Milliman, 1982, 1986; Yalch and Spangenberg, 1988, 1990; Kelleris and Kent, 1992; Yalch and Spangenberg, 1993; Gulus and Schewe, 1994; Dubé et al., 1995; Herrington and Capella, 1996; Yalch and Spangenberg, 2000; Chebat et al., 2001; Dubé and Morin, 2001; Mattila and Wirtz, 2001; Sweeney and Weber, 2002; Spangenberg et al., 2005). Yalch and Spangenberg (1993) suggested that music is a particularly appealing atmospheric element because it is relatively inexpensive, easily changed and has predictable appeals to customers based on their age, gender and life styles.

Gulus and Schewe (1994, p 326) concurred with Yalch and Spangenberg (1993) and noted that 'the range of possible music choices is vast and different musical styles may lead to varying consumer responses'. Volume (Herrington and Capella, 1996), tempo (Milliman, 1982, 1986; Dubé et al., 1995; Chebat et al., 2001; Dubé and Morin, 2001; Mattila and Wirtz, 2001), age (Yalch and Spangenberg, 1990), musical modality (Kelleris and Kent, 1992) and genre (Yalch and Spangenberg, 1988, 1990, 1993; Gulus and Schewe, 1994; Yalch and Spangenberg, 2000, Spangenberg et al., 2005) have all been demonstrated to affect consumer responses to background or foreground music. Some studies have combined different element of music together in their studies, tempo and volume (Herrington and Capella, 1996) age and music variation (Yalch and Spangenberg, 1990), tempo and genre (Sweeney and Wyber, 2002).

Music has also been combined with the ambient variable of olfaction (Mattila and Wirtz, 2001, Spangenberg et al., 2005). Overall there have been very few olfaction studies, two were researched with music and three were researched in isolation (Spangenberg et al., 1996; Chebat and Michon, 2003, Spangenberg et al., 2006). Babin et al. (2003, p 542) noted that ‘combinations of ambient characteristics affect how consumers react to a store concept’. Other variables that have been researched together are colour and lighting (Spies et al., 1997; Babin et al, 2003). Similarly to olfaction, colour has had three studies that were explored in isolation (Bellizzi et al., 1983; Bellizzi and Hite, 1992; Chebat and Michon, 2007). Turley and Milliman (2000) noted that colour research in retail settings has been rather sparse.

Only one study looked at lighting in isolation (Summers and Herbert, 2001). Summers and Herbert (2001) noted that ‘because of the limited amount of empirical research on the effects of lighting on consumer behaviour, we recommend additional field investigations be conducted’. Spangenberg et al. (2005, p 1583) point out that ‘although environmental stimuli have been found to influence shopping behaviour, empirical knowledge of how these variables interact to affect shopper perceptions and actions is lacking’. Babin et al., (2003, p 550) indicated that ‘perhaps other ambient factors can be studied in combination with color and/or lights’. To date there has been no research on music and colour, music and lighting or colour and olfaction. Research into these combinations might provide insight into the area of servicescapes.

METHODOLOGICAL APPROACHES

Country of Origin

It is important to note where research has been carried and the type of research being done in order for a comprehensive understanding of the service literature and effects. Different countries may produce different conclusions though their research is similar. It is important to understand that service environments in Europe may be very different from service environments in other parts of the world. A diverse range of nations is represented in this review. Of the forty three studies reviewed, the majority of them were carried out in North America. The reasoning behind the vast amount of research done in North America could be due to Donovan and Rossiter (1982) seminal article being carried out there.

A few were done in Europe (Hui and Bateson, 1991; Kenhove and Desrumaux, 1997; Spies et al., 1997; Foxall and Greenley, 1999; Reimer and Kuehn, 2004; Bigné et al., 2005; Newman, 2007). In Europe there has been growing interest since the 1990's in the area. It was also Foxall and Greenley (1999), who conducted research in the UK that illustrated the importance of all three of Mehrabian and Russell's (1974) dimensions, pleasure, arousal and dominance. Since then it has been more research done on dominance in the USA (Yalch and Spangenberg, 2000; Machleit and Eroglu, 2000), Israel (Gilboa and Rafaeli, 2003) and UK (Newman, 2007).

There has also been research in other parts of the world such as Australia (Amato and McInnes, 1983; Donovan et al., 1994; Sweeney and Wyber, 2002), Hong Kong (Tai and Fung, 1997) and Singapore (Wirtz et al., 2000). It is important to note that in some cases the country of where the research took place is not given. In these cases origin of the authors were used.

Data Collection

Of the forty three studies, the majority of them were field studies or field experiments (Milliman, 1982, 1986; Wakefield and Blodgett, 1996; Chebat and Michon, 2007) closely followed by laboratory research (Bellizzi et al., 1983; Babin et al., 2003; Mattila and Wirtz, 2006). Russell (1980) used self report in his research and Donovan and Rossiter (1982) used a descriptive design. Of the studies done in the North America the majority of them have been field research or field experiments (Yalch and Spangenberg, 1988, 1990, 1993; Spangenberg et al., 2006) with nearly as many laboratory experiments (Baker et al., 1992; Chebat et al., 2001; Babin et al., 2003).

In other parts of the world preference has been for field research studies (Amato and McInnes, 1983; Donovan et al., 1994; Kenhove and Desrumaux, 1997; Spies et al., 1996, Tai and Fung, 1997; Foxall and Greenley, 1999; Reimer and Kuehn, 2004; Bigne et al., 2005; Newman, 2007) which far surpasses preference for laboratory research (Hui and Bateson, 1991; Wirtz et al., 2000; Sweeney and Wyber, 2002; Gilboa and Rafaeli, 2003)

Sampling Size

The sample size has varied greatly over the past 27 years. For example Donovan and Rossiter (1982) research has become a seminal article and is one of the only studies that take a descriptive design with a surprisingly small sample of 30 respondents. However more recent research has generated a wider sampling frame, with Summers and Herbert (2001) having the largest sample to date of 2367 respondents. Milliman (1986) also looked at a very large sample of 1392 customer groups and 644 observed customer groups. However the majority of the sample sizes have ranged between 100 and 400 (Russell, 1980; Hightower et al., 2002; Bigne et al., 2005) with very few using less than 100 respondents (Yalch and Spangenberg, 1988, 1990; Donovan et al., 1994, Gulus and Schewe, 1994; Yalch and Spangenberg, 2000).

Machleit and Eroglu (2000) conducted three waves of research with each wave using between 153 and 401 respondents. This coincides with the majority of samples sizes used in research. Other research had an overall considerably larger sample size, Chebat and Morin (2007) used 587 adult shoppers, Chebat et al. (2001) used 536 business students, Summers and Herbert (2001) looked at 2367 respondents on video cameras and Reimer and Kuehn (2004) looked at two separate service environments and used a large sample of 580 for the bank and 565 for the restaurant. Some research did not indicate how many respondents were used (Yalch and Spangenberg, 1993; Wakefield and Blodgett, 1994, 1996). It is important to know the size of the studies in order for future researchers to know what direction to take in choosing their sample sizes.

Diversity in the methodological approaches is apparent across the studies from Russell's (1980) research up to Newman's (2007) research. There is no consistency to the size of the studies in either experimental designs or within the countries of origin. The North American laboratory research ranges in size from 71 (Yalch and Spangenberg, 2000) to 536 respondents (Chebat et al., 2001), their field research range from 36 respondents (Milliman 1982) to 2367 (Summers and Herbert, 2001). In other parts of the world experimental research has ranged from 115 respondents in the UK (Hui and Bateson, 1991) to 240 respondents in Singapore (Wirtz et al., 2000). In terms of the field research the number of respondents has ranged from 60 (Donovan et al., 1994) to 580/565 (Reimer and Kuehn, 2004).

More recent research designs have used consumers (Reimer and Kuehn, 2004; Bigne et al., 2005; Spangenberg et al., 2006; Chebat and Morin, 2007; Newman 2007) as the unit of analysis whereas previous research has used students as respondents (Donovan and Rossiter, 1982; Baker et al., 1992; Kelleris and Kent, 1992; Wakefield and Blodgett, 1994; Dubé et al., 1995; Spangenberg et al., 1996; Machleit and Eroglu, 2000; Wirtz et al., 2000; Yalch and Spangenberg, 2000; Chebat et al., 2001; Sweeney and Wyber, 2002; Gilboa and Rafaeli, 2003). Bellizzi and Hite (1992) used both student and female respondents. Similarly a study conducted in Australia contained only female students (Sweeney and Wyber, 2002). Babin et al. (2003) noted that they used females from a university community but did not specify if they were students.

Of the studies carried out in the North America the majority use customers as the sample selection (Gulus and Schewe, 1994; Summers and Herbert, 2001; Chebat and Morin, 2007), with some using student samples (Baker et al., 1992; Kelleris and Kent, 1992; Wakefield and Blodgett, 1994). Of the studies carried out in other parts of the world, Europe and Hong Kong contained no student sample size, whilst Singapore (Wirtz et al, 2000), Israel (Gilboa and Rafaeli, 2003), and one study from Australia (Sweeney and Wyber, 2002) contained student samples.

In some cases there was lack of information given in the studies of the sample size (Yalch and Spangenberg, 1993; Wakefield and Blodgett, 1994; Wakefield and Blodgett, 1996), the country of origin (Gilboa and Rafaeli, 2003), or the gender of respondents (Donovan and Rossiter, 1982; Milliman, 1982; Yalch and Spangenberg, 1988; Hui and Bateson 1991; Baker et al., 1992; Gulus and Schewe, 1994; Kenhove and Desrumaux, 1997; Tai and Fung, 1997; Foxall and Greenley, 1999; Machleit and Eroglu, 2000; Yalch and Spangenberg, 2000; Chebat et al 2001; Hightower et al., 2002; Mattila and Wirtz, 2006). Authors need to be aware of what information is being given. In order to conduct further empirical research, researchers need to know in detail what has been done in the past and where the gaps lie in the research.

CONCLUSION

Despite the phenomenal growth in the servicescapes literature in North America and other parts of the world there is an acknowledged paucity of empirical research in the area which needs to be addressed (Milliman, 1982, 1986; Yalch and Spangenberg, 1988, 1990; Dubé and Morin, 2001; Newman, 2007). It was Donovan and Rossiter (1982) seminal article which first applied the Mehrabian and Russell (1974) environmental psychology model to the study of store atmosphere.

Emphasis on the need for further research into the area of servicescape continued through the 1990's through Bitner's (1992) framework. She indicated that there is a 'surprising lack of empirical research or theoretical frameworks addressing the role of physical surroundings in consumption settings' (Bitner 1992, p 57). Donovan et al. (1994, p 284) also noted that 'none of the studies has strictly followed the methodology and analysis of the Mehrabian and Russell (1974) model as proposed by Donovan and Rossiter (1982). The critical importance of servicescapes has been clearly illustrated through this review. However there remains a constant call for further research and in the past few years the call has been intensified (Bigne et al., 2005; Spangenberg et al., 2005; Mattila and Wirtz, 2006; Spangenberg et al., 2006; Chebat and Morin, 2007; Ezeh and Harris, 2007; Newman, 2007). As Gilboa and Rafaeli (2003, p 207) precisely indicated 'additional research is necessary to unravel the precise nature of the relationship between Pleasantness, Arousal and Dominance, and environmental variables'.

FURTHER RESEARCH DIRECTION

Consistently over the last three decades, marketing scholars have continued to highlight the insufficiency of empirical research in the area of servicescapes (Bitner, 1992; Donovan and Rossiter 1982, 1994; Hoffman and Turley, 2002; Reimer and Kuehn, 2004). Firstly, most of the studies carried out on the influence of servicescapes elements on purchase decisions have tended to focus on single elements such as music (Milliman, 1982, 1986; Yalch and Spangenberg, 1988, 1990; Kelleris and Kent, 1992; Yalch and Spangenberg, 1993; Gulus and Schewe, 1994; Dubé et al., 1995; Herrington and Capella, 1996; Yalch and Spangenberg, 2000; Chebat et al., 2001; Dubé and Morin, 2001; Sweeney and Weber, 2002), colour (Bellizzi et al., 1983; Bellizzi and Hite, 1992; Chebat and Michon, 2007), olfaction (Spangenberg et al., 1996; Chebat and Michon, 2003; Spangenberg et al., 2006), lighting (Summers and Herbert, 2001). Only a few studies have incorporated more than one stimuli, music and olfaction (Mattila and Wirtz, 2001; Spangenberg et al., 2005), colour and lighting (Spies et al., 1997; Babin et al, 2003).

To this extent there is little known about the entire mix of aspects of the servicescape. Empirical research is needed on the nature and dynamics of servicescapes using multiple elements. As noted by Reimer and Kuehn (2004, p 802) 'there is a need for further research examining the effect of single aspects as well as entire servicescapes'. Spangenberg et al. (2005, p 1583) also point out that 'although environmental stimuli have been found to influence shopping behaviour, empirical knowledge of how these variables interact to affect shopper perceptions and actions is lacking'. Spangenberg et al. (2006, p 1287) further suggested that 'exploring the congruity of multiple environmental cues and its effect on consumer behaviour is one useful direction for future research'. These issues highlight that additional empirical research has been called for using multiple servicescape elements. Ezeh and Harris (2007, p 70) noted 'it is expected that such integration of multiple elements will increase the scant knowledge base on the global configurations of servicescapes'.

Secondly research into the servicescapes concept could benefit from cross cultural comparative studies. This would add valuable insights to the body of knowledge. However in order to do this more research needs to be conducted outside of North America. The vast majority of research has been from North America (Russell, 1980; Yalch and Spangenberg, 1993; Machleit and Eroglu, 2000; Chebat and Morin, 2007). More European studies could be conducted in order to compare results with the North American studies. Also in order to have viable comparisons similar research needs to be conducted. Currently North American research has favoured field research and using student samples. In other parts of the world including Europe preference has been for field research and customer samples. For future research the North America could conduct more field research studies using customer samples in order to compare results with other studies from around the world.

Thirdly, online servicescapes, which is being addressed in an additional paper, is an important element for further research. A limited amount of studies have been carried out of the effects of online servicescapes (Eroglu et al., 2001, 2003; McKinney, 2004; Mummalaneni, 2005; Vilnai-Yavetz and Rafaeli, 2006; Kim et al., 2007). Ezeh and Harris (2007, p 72) indicated that ‘more are required to reflect the rapidly changing face of today’s business; to determine the extent to which the significant role of traditional servicescapes applies in an online context; and adequately meet the online challenge’.

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