

The influence of scent on consumers' waiting inferences

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Abstract

This study was designed to add to the very limited number of empirical studies examining the influence of the service environment on consumers' perceptions and evaluations of the service experience. This study examines the impact of an element of the servicescape, ambient scent, on consumers' perceptions of the waiting experience. The study was undertaken in a simulated environment and involved waiting for service during a routine transaction. The research model tested the impact of ambient scent on emotions, wait attribution and service quality. Whilst the model was of relatively good fit, the model did not establish a significant positive influence of pleasant ambient scent on consumer emotions and perceptions of wait attribution and service quality.

Keywords: Servicescape, Consumer Behaviour, Waiting, Wait attribution, Emotions, Service Quality

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Introduction

In service settings, the environment or atmospherics is often constructed to provide consumers with a satisfying service experience and to project a favourable image with the objective of engendering positive evaluations of service quality, merchandise quality, value and ultimately influencing patronage intentions. These relationships have largely been demonstrated in the marketing literature (see Turley and Milliman 2000). Kotler suggested that "...in some cases, the place, more specifically the atmosphere, was more influential than the product itself in the purchase decision" (1973, p.48).

There is now considerable interest in the potential impact of scent on behaviour. Among the claimed scent effects that have received attention in the Australian media are the claimed scent effects of relaxation, sexual attraction, appetite depressant effects and the potential to increase sales. There is substantial anecdotal evidence that popular interest in scent effects has been compounded in the service industry where scent is introduced into the service environment. Without the benefit of adequate research, little regard is given to identification of the most appropriate scent, and there is generally a lack of post implementation study to confirm the appropriateness of the decision (Carter, 2002). The marketing literature confirms this paucity of empirical research on the environmental effects, though conventional wisdom and the actions of many service providers suggest that scent has a critical bearing on sales, evaluations and future patronage intentions (Baker, Parasuraman, Grewal and Voss, 2002; Bitner, 1992; Turley, Fugate and Milliman, 1990). This study seeks to test the impact of ambient scent in the service environment and, in particular, study its impact on consumers' inferences on wait attribution, service quality and emotional evaluation of a wait for service.

Olfactory Influences on Behaviour

The retail environment offers a plethora of stimuli that can serve as cues to consumers looking for information- processing shortcuts or heuristics (Baker, Grewal and Parasuraman, 1994). Of all the human senses, smell has the greatest impact on our emotions (McCarthy, 1992). That scents are processed in the limbic system of the brain, which is the centre of emotions, explains this dominance (Leukel, 1976). Smell more than any other sense, is directly connected to feelings of happiness, hunger, disgust and nostalgia – the same feelings that marketers want to tap (Wilkie, 1995). While there is general

acceptance of a connection between ambient scent and affect state (Baron, 1990; Gibbons, 1986; Monmaney, 1987), there has not yet been any systematic attempt to determine the exact nature of affective responses to ambient scent (Gulas and Bloch, 1995). The ability of scent to affect consumer judgments may be a function of several possible mediators: mood, hedonic transfer of perceived pleasantness, and cognition (Ellen and Bone, 1998).

The pleasantness of a scent commonly seems to be its most salient immediate characteristic (Engen and McBurney, 1964). Ehrlichman and Bastone (1992) noted that odours are almost always experienced as either pleasant or unpleasant, and they had been unable to find odours that people consistently rated as neutral. There is a general trend to prefer some odours to others, and this tendency can already be found in infants 9 months old, suggesting a biological substrate for preference judgments (Eysenck, 1992). In most studies, of either scented products or scented environment, researchers have generally attributed the effects of the scent to its pleasantness or unpleasantness, thus implying that the hedonic nature of the scent is significant (Bone and Jantrania, 1992). Specifically, pleasant scents were thought to be "pleasant experiences which created a mood or an overall feeling which, in turn, transfers to the product being judged" (Bone and Jantrania, 1992 p. 290). However, the finding that changes in self-reported mood seem to parallel changes in hedonic ratings of odours (Ehrlichman and Bastone, 1992) suggests that genuine changes in subjects' experiences take place in the presence of pleasant and unpleasant odours. Scents may also aid in the retrieval of stored information and increase elaboration about a target market (Mitchell, Kahn and Knasko, 1995). As some marketers have found, and research has indicated, scents paired with an experience often becomes a powerful cue for that experience in years to come.

Studies by Baron (1980, 1981, 1983, and 1990) concluded that exposure to a pleasant scent induced a positive mood and elicited behavioural and judgmental evaluations biased in a mood congruent direction. Conversely, studies have established a scent effect without a mood shift (Bone and Scholder, 1998; Chebat and Michon, 2003; Knasko, 1992; Spangenberg, Crowley and Henderson, 1996). These studies suggest an alternative processing for the scent effect which simply transfers the pleasantness of the scent to the object being evaluated.

A number of researchers have demonstrated that scent effects are subject to cognitive mediation. The reaction to the odour may be based on an interaction between odour and cognitive factors, rather than on odour exposure itself (Kirk-Smith and Booth, 1987). The work of Knasko, Gilbert and Sabini (1990)

demonstrated that even feigned environmental odours affect mood, suggesting that human responses to odours are suggestible.

The small body of olfactory research extant in the marketing literature has focused mostly on product scents (Bone and Jantrania, 1992). Several studies support the idea that associating a pleasant scent directly with a product increases the possibility of, and favourable rating of, the product by consumers. The second form relates to scent as a component of the overall ambient environment. Gulas and Bloch (1995) concluded that ambient scent – scent that is not emanating from a particular object but is present in the environment – may be of greater interest than product specific scents. They found it could potentially influence perceptions of the store and all its products, including those products that are difficult or inappropriate to scent (for example, office supplies and furniture). In supporting this contention, research on environmental influence on quality inferences would suggest that a store with pleasant ambient scent may lead customers to infer that the store sells high quality merchandise and offers high quality service (Baker, Grewal and Parasuraman, 1994).

Numerous articles have tangentially suggested the potential effects of ambient scent (Bitner, 1992; Dawson, Bloch, and Ridgway, 1990; Kotler, 1973). However, only very recently have there been investigations designed primarily to assess the effects of ambient scent on consumer behaviour (Bone and Ellen, 1999; Chebat and Michon, 2003; Hirsh, 1995; Mattila and Wirtz, 2001; Mitchell, Kahn and Knasko, 1995; Spangenberg, Crowley and Henderson, 1996). Taken together, these studies have provided mixed results on the impact of ambient scent on approach behaviours. Another factor often considered by the olfaction researchers is the congruency between the scent and the environment (Bone and Jantrania, 1992; Ellen and Bone, 1998; Mattila and Wirtz, 2001; Mitchell, Kahn and Knasko, 1995; Spangenberg, Crowley, and Henderson, 1996). This interest stems from the premise that consumers perceive their environment holistically and that consumers will behave more positively in an environment with matching stimuli from the various environmental cues (Bitner, 1992; Solomon, 1985).

This study seeks to address the calls for more research on environmental effects (see review in Turley and Milliman, 2000), and on the waiting experience (Baker and Cameron, 1996) and of the negative consequences of affect (Baker, Parasuraman, Grewal and Voss, 2002).

The Impact of Waiting

As waiting for service is a common experience, past research has sought to develop a better understanding of the impact of perceived delays in service delivery on service evaluations (Dube-Rioux, Schmitt, and Leclerc, 1989; Maister, 1985; Taylor, 1994, 1995). Jones and Dent (1993) found that over 70% of all service customers were clearly concerned about waiting times. Although there are some exceptions, waiting for service is generally perceived to be a negative experience and is negatively correlated with service evaluations (Katz, Larson and Larson 1991; Taylor, 1994; Taylor and Claxton, 1994). Waiting has even been compared to spending time in jail; one is doing time for the "inefficiency crime" committed by the provider, or his/her system (Larson, 1987).

Shemwell and Cronin (1994) and others (eg Baron and Harris, 2002) outline a range of strategic options available to the firm in coping with demand /supply imbalances. Whilst these strategies for managing demand are effective for some organisations, they do not completely eliminate waiting. So, for even well managed service organisations, trying to accommodate the often unpredictable demand for service, waiting is often unavoidable. Hence, the common occurrence of waiting lines at cash registers, post offices, bank tellers and government authorities. Another approach service organisations may take, given the inevitability of waiting, is to make waiting a less painful experience for customers (see Baker and Cameron, 1996, for a review).

Model Development and Methodology

Model Development

Baker and Cameron (1996) note that little attention has been paid to the effects of the service environment on affect and consumer perceptions of waiting. It is interesting to note that Baker and Cameron (1996) did not develop any propositions about scent, even though it has been shown to significantly alter affect state and evaluations, and is commonly used in practice in waiting situations. This paper reports a study which examined the potential impact of the use of ambient scent in the service environment to positively influence consumers evaluation of a routine transaction involving a wait for service.

Figure 1 illustrates a conceptual model of how ambient scent may influence waiting consumers' evaluations of a service experience involving a routine transaction. The model is derived from the environmental research stream by

Mehrabian and Russell (1974) where atmospheric cues generate cognitive and emotional responses, and, in turn, approach/avoidance behaviour. Earlier waiting studies involving environmental influences (Cameron, Baker, Peterson, and Braunsberger, 2003; Grainger and Clulow, 2004; Hui, Dube and Chebat, 1997) also adopted environmental effects research as a basis for their model development. The core constructs being examined in the study are: wait attribution, emotional evaluation, and service quality. The causal links are depicted in the model at figure 1.

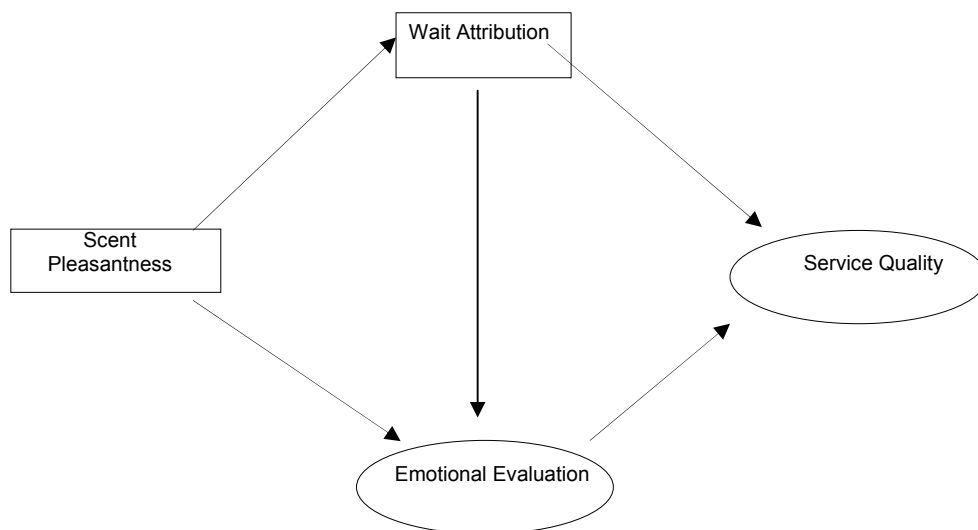


Figure 1. The Research Model: The Effect of Scent on Consumers' Waiting Inferences

Wait and Attribution

Attribution theory furnishes a structure for the prediction of consumer responses to a product or a service failure (Folkes, 1984, 1988; Weiner, 1985). Weiner (2000) considered the longevity of attribution theory, which he saw as over 100 years old, to its focus on the universal concern with explanation – why a particular event, or state, or outcome has come about and the consequences of phenomenal causality. According to attribution theory (Folkes, 1984), causal inferences made by customers about their wait experience have an impact on their evaluations and behaviour. Causes of product or service failure can be categorised by their stability (whether they are temporary or fairly permanent), locus (whether they are consumer or firm related), and controllability (whether they are under volitional control or are constrained) (Folkes, 1984).

Various models designed to develop a better understanding of the wait experience and the relationship between delays and evaluations of service have seen wait attribution as a significant variable that may mediate the relationship (Baker and Cameron, 1996; Taylor, 1994). In empirical studies of the airline industry (1994), and subsequently, in a laboratory experiment, Taylor (1995) found that delays do affect service evaluations, and that the degree to which the service provider has control over the delay influenced evaluations such that, service evaluations were lowest when the degree of perceived service provider control was high. Similarly, in experimental research in a simulated environment, Chebat, Filiatrault, Gelinias-Chebat and Vaninsky (1995), showed that both the mood and attribution process affects the evaluation of service quality: the higher the consumer's pleasure the higher is his/her evaluation of service quality. Also, the more external and less stable the cause of the service delay, the better the perceived quality. These studies tends to confirm the results of earlier research by Folkes (1984, 1988).

Hypothesis 1: There is a direct and negative relationship between a pleasant ambient scent and wait attribution.

Hypothesis 2: There is a direct and negative relationship between wait attribution and service quality.

Wait and Emotion

Consumers' emotional responses to service environments are directly related to their willingness to spend time and money there, to browse, evaluate, and consume (Donovan, Rossiter, Marcolyn, and Nesdale, 1994). Depending on the context, a delay in service provision may be experienced as an enjoyable pastime or an inexcusable imposition (Dube-Rioux, Schmitt, and Leclerc, 1989). Waits have been variously described as frustrating, annoying, stressful, disagreeable, uncertain, demoralising, aggravating, and producing anxiety (Dube-Rioux, Schmitt, and Leclerc, 1989; Gardner, 1985; Maister, 1985; Osuna, 1985). Researchers consider that these negative affective states tend to bias perceptions and evaluations in mood congruent directions (Hui and Tse, 1996; Taylor, 1994). These findings are consistent with studies that mood states can bias judgments of services in the direction of the mood (Gardner, 1985), and lead to the proposition that service providers need to manage the service interaction to foster positive moods. So, in addition to the perceived consumer evaluation of wait attribution, the negative affective reactions are seen as important mediators of the relationship between delay and service evaluation. Hence, this study examines the impact of ambient scent, an environmental

elements that may moderate the negative affective reactions to waiting and waiting inferences of wait attribution.

Hypothesis 3: There is a direct and positive relationship between a pleasant ambient scent and emotional evaluation of the wait.

Hypothesis 4: There is a direct and negative relationship between wait attribution and emotional response to the wait.

Hypothesis 5: There is a direct and positive relationship between emotional response to the wait and service quality.

Wait and Quality

The construct of service quality has received a great deal of attention from services researchers and has been systematically researched over the past 20 years. In the waiting studies, the consequence of waiting for service has resulted in negative service evaluations. The outcomes of a study in the hospitality industry in the UK by Jones and Dent (1993) is atypical of other research findings. Results of the study indicated that over 70% of consumers were clearly concerned about waiting times. The results suggested that, while customers believe both quality and value are worth waiting for, there comes a point where an unacceptable wait begins to affect their perception of quality.

Hypothesis 6: There is a direct and positive relationship between a pleasant ambient scent and perceived service quality.

Research Design

A simulated service experience conducted in a laboratory was used to examine the relationship between ambient scent and consumers' inferences about the service experience. The laboratory setting provided strict control of the other atmospheric variables such as heat, light, noise and crowding, thus ensuring that any detected effects on subject response were most likely attributable to changes in ambient scent rather than to other confounding variables.

As one would expect, service managers are reluctant to induce negative conditions in the service environment, even for the purpose of empirical research. So, service researchers are increasingly using experimental methods and simulated environments as effective means to study specific customer and employee reactions to environmental changes or alternatives when it is

important to know their true reactions and preferences (Baker et al, 2002; Hui, Dube and Chebat, 1997; Zeithaml and Bitner , 2003) . There is also the overriding consideration that, from a consumer viewpoint, next to being in the service environment itself, seeing a videotape is currently the richest way to present a service environment.

Simulated Environment

The video scenario of the experiment was of a consumer's waiting experience within the firm's facilities for a routine transaction. The scenario selected was considered similar to a situation one may encounter in real life e.g. a wait in a bank, post office, medical insurance agency or government administration area. There was no obvious identification of the service provider in the scenario, and the video portrayed only the inside of the service provider's facility. The setting was the area in front of the reception desk of a service provider, and the view of the facility related to what one would normally see standing in line for service. A number of researchers have found that the use of videotapes have been valid in simulating the service environment in studies of waiting (for example, Cameron et al, 2003; Chebat et al, 1995; Hui, Dube and Chebat, 1997). The videotaped scenario provided a sense of the real-life setting that could not have been achieved using either slides or a written description.

The subjects recorded their reactions to the wait experience scenario using a self-administered questionnaire.

Stimulus Selection

An analysis of the scent literature has led to the inference that the impact of scent will vary with its pleasantness, congruence with other factors in the environment, and innate properties (low arousal or high arousal). Scent pleasantness, however, has been viewed as the most salient factor in establishing the scent effect, and, in accordance with this finding, the primary objective of pretest 1 was to select scents for the main experiment which were perceived as pleasant. A secondary consideration was that these scents were to be seen as congruent, or at least not incongruent, with the service environment. Twenty undergraduate student volunteers, including 10 female and 10 male, undertook the scent selection task.

The initial selection of scents for evaluation in the pretest was based on three criteria: pleasant smell, mood effects and no side effects. As consumer behaviour literature lacks theoretical guidance on scent selection, the essential

oil books (for example, Gill, 1996), together with expert advice from Jeff Carter, Ecomist Pty Ltd, were used as a source of mood effects and cautionary advice. The scents selected for pretesting were proven safe for human testing (i.e., non-carcinogenic, non-noxious) and were natural in origin and were commonly used in retail and service environments..

Pretest Experiment

A number of pretests were conducted prior to the main experiment.

Pretest 1 determined the appropriate ambient scents to achieve the desired pleasure dimension, whilst also ensuring that the scents were not viewed as incongruent with the service scenario. Two scents, vanilla and lavender were selected as the pleasant scents for the main study. Whilst the pleasantness of the scent was the overriding consideration, care was also taken to select scents that were not seen as incongruent with the service environment.

Pretest 2 resulted in the discovery of the appropriate scent infusion periods in the laboratory needed to achieve the scent intensity levels for the main study. In accordance with the Ethics approval for the study, the intensity levels of the ambient scent were to be controlled and monitored by Jeff Carter, Director, Ecomist Pty. Ltd., an expert in the field of aroma marketing.

The scent was infused into the air by means of a dispenser affixed to the rear of the entrance door of the test laboratory. This scent diffusion technique required a period of approximately one hour to set the ambient scent in the laboratory at the appropriate level for the test.

Pretest 3 provided support for the videotaped presentation of a real-life service scenario and for the easy comprehension of the instructions to the subjects and the intent of the questionnaire.

The conduct of these pretests provided a sound basis for the implementation of the desired experimental conditions in the main study.

Subjects

The data collection in both the pretest and the main experiment involved convenience samples of third year undergraduate students who had volunteered for the study. The study was not conducted in the students' normal classroom and there was no offer of reward or inducement, either monetary or enhanced

grades, made to the participating students. Subjects were advised, however, that feedback on the study would be provided in the month following the study.

The data collection in both the pretests and main experiment involved convenience samples of third year undergraduate students. The data was collected on 2 campuses of a mid-size Australian university over a 3 day period. A total of 197 undergraduate business students were used as volunteer subjects for the study. The twenty-six subjects participating in pretests 1 and 2 were precluded from participation in the main study.

The study was not conducted in the students' normal classroom and there was no reward or inducement, either monetary or enhanced grades, made to participating students. The subjects reflected a typical student profile with over 90% of the participants being under 25 years of age. Smell acuity has been shown to decrease with age (Enns and Hornung, 1988), thus, restricting the sample to younger adults should reduce the within cell differences and thereby provide a stronger test of theory (Calder, Phillips and Tybout, 1981).

Model Measures

Scent:

A confirmatory question about the pleasantness of the scent was included in the instrument. The single item stated "The facility/store smells pleasant". The measure was rated on a 7-point Likert scale from 1=strongly disagree to 7=strongly agree.

Wait Attribution

The attribution of the wait was assessed by a three item scale based on the "Causal Dimension Scale" designed and validated by Russell (1982). The three items in the scale were adapted to refer specifically to a 'wait' rather than the more general term, 'incident', as used by Russell (1982). The items included in this study were: "The employee was the cause of the wait (AT1); "The wait would be a regular element of service delivery at this facility/store (AT2)", and "The wait was under the control of the employee (AT3)". The items were measured on a 7-point Likert scale from 1=strongly disagree to 7=strongly agree.

Emotional response to the wait:

The emotional response to the wait was measured using the four item scale used by Grainger and Clulow (2004) and adapted from the study by Hui, Dube and Chebat (1997). That study found the scale to be reliable, having a reliability coefficient of .83. The four items in the scale were: "Did the wait

make you feel frustrated ? (EW1)”; “Did the wait make you feel irritated? (EW2)”; “Did you find the situation stressful? (EE2)”; “Did you find the situation tense? (EE1)”. The items were measured on a 7-point Likert scale from 1=not at all to 7=extremely.

Service Quality

Perceived Service Quality was measured using a four item scale. The four items in the scale were adapted in this case to refer to a service environment, rather than a retail setting. The items were: “Customers could expect to be treated well in this facility/store” (Q1); “The facility/store would offer high quality service (Q2)”; “The facility/store would offer friendly service (Q3)”; “The facility/store would offer fast service (Q4)”. The items were measured on a 7-point Likert scale from 1=very low 7=very high.

Demographics:

A demographic section was included in the instrument and the following items were collected: gender, age, country of birth and cultural origin. The data collection in this area was limited primarily to factors that were most likely, given the limited evidence in past studies, to moderate the impact of ambient scent as noted by Bone and Ellen (1999), in their review of olfaction research.

Results

Confirming the Conceptual Structure

As a first step in testing the measurement model, the internal consistency of the dependent measures (wait attribution, emotional evaluation, and service quality) was examined. Cronbach’s alphas for respective measures of the three constructs of .67, .89 and .87 were obtained. Two of the three measures were above the .70 level, which was recommended as an acceptable level by Nunnally (1978).

Consequently, a confirmatory factor analysis (principal-axis with oblique rotation) was conducted to examine the extent to which the observed variables were related to their hypothesised underlying latent constructs. A three-factor solution was found based on the study data which supported the three latent constructs of wait attribution, emotion and service quality.

A three-factor measurement model, involving the factors wait attribution, emotion and service quality, was tested using confirmatory factor analysis

(CFA). The results provided a good model fit ($\chi^2(41) = 52$, RMSEA = .04, AGFI = .95).

Structural Equation Model

To examine the causal relationships in the study, the structural model depicted in figure 2 was tested. The Amos structural equations modeling software was used for the analysis. Standardised path coefficients are presented in figure 2.

The model produced a chi-square value of 69.25 with 49 degrees of freedom, a goodness of fit index of .94, and a root mean square residual of .05. The normed chi-square value CMIN/DF of 1.413, which is more appropriate for smaller sample sizes (Byrne, 2001), allowed rejection of the null hypothesis of lack of model fit. Incremental fit indices (which compare the proposed model to a baseline or null model) also indicated a very good fit for the proposed model. The model posted a .95 value for the Tucker-Lewis incremental fit index and a .96 for the comparative fit index.

Scent pleasantness was not found to have a significant direct effect on wait attribution (H1: standardized path coefficient of -.04), service quality (H6: standardised path coefficient of .01), or emotional evaluation (H3: standardised path coefficient of .02) as the standardised path coefficients were not statistically significant at $p = .05$. Thus Hypotheses 1, 3 and 6 are unsupported. As hypothesised wait attribution had a negative influence on service quality (H2: standardised path coefficient of -.14) and a positive influence on (negative) emotions (H3: standardised path coefficient of .02). Thus hypotheses 2 and 4 are supported. Hypothesis 5 was supported as the emotional evaluation of the study participants directly influences their perceptions of service quality (H5: standardised path coefficient of -.23). In other words, the more positive the emotional evaluation, the better the service experience was evaluated.

In summary, analysis of the model paths established that scent pleasantness was not found to have a significant effect on wait attribution, emotions or service quality, either directly or indirectly. The significant effects that were found were the effect of wait attribution on emotions and, both directly and indirectly on service quality. Earlier studies (Chebat et al, 1995) also found wait attribution to significantly impact service quality.

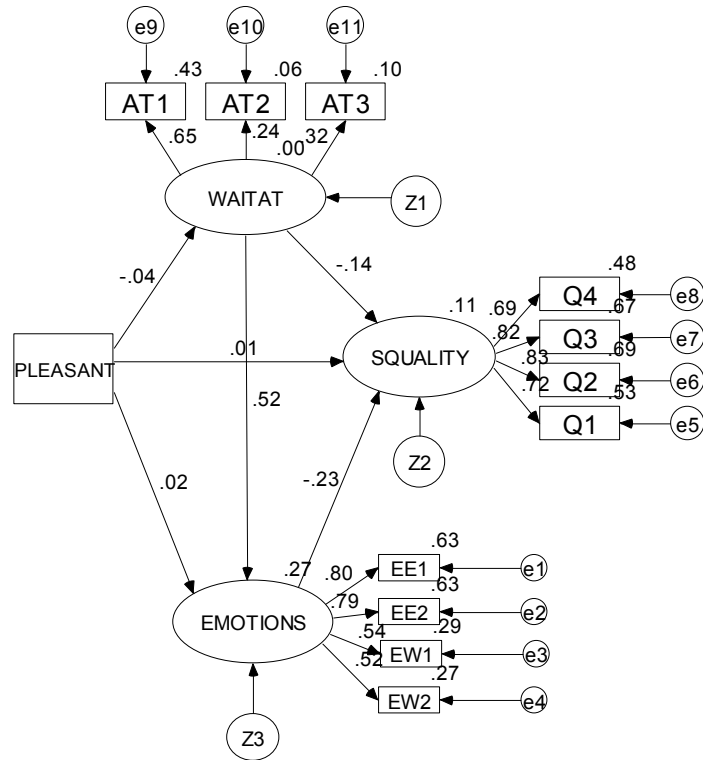


Figure 2. The Structural Equation Model: The Effect of Scent on Consumers' Waiting Inferences

Discussion and implications

This study adds to the very limited empirical research into the influence of ambient scent on consumers' responses and evaluations of the service experience. The possibility of manipulating ambient scent in the environment to induce positive consumer responses and evaluations has gained momentum given the recently publicized availability of low-cost and effective ambient scent dispensers for commercial applications (Carter, 2002).

The model under investigation follows the environmental psychology paradigm where the servicescape influences approach behaviours via emotion and cognition. Despite a relatively good model fit (CMIN/DF of 1.413, AGFI of .94, and RMSEA), the structural equation model did not support any significant pleasant scent effects. Although the empirical evidence is scant other recent studies, in both simulated and real environments have found significant pleasant scent effects.

The study had several limitations as outlined below, but rather than discounting a possible use of ambient scent in a service environment to create positive behaviour and evaluations, more effort needs to be placed on better understanding the scent effect. This study used scent pleasantness as the overriding criteria in the scent selection phase, but it could be that other scent effects confounded the operation of the scent influence.

The emotional impact of scent is central to perfume use, aromatherapy, and product and environmental fragrancing. Guidance on mood effects may be obtained from any number of books on aromatherapy or olfaction studies, but, occasionally there is conflicting guidance on the mood effects. For example, in brain-wave research lavender has been found to be relaxing (Tori, Fukado, Kanemoto, Miyanchi, Hamuauza and Kawasaki, 1988), which accords with the usual aromatherapy guidance on the scent. Yet in a replication of the study, lavender was found to be very unpleasant and very strong – too strong and unpleasant to be relaxing (Lorig and Roberts, 1990). Spangenberg, Crowley and Henderson (1996) found lavender to be hedonically neutral. This situation adds further complexity to the understanding of the scent effect, and also on the ability to develop prescriptive guidelines on use for service managers.

Moreover, given that consumers perceive their environment holistically and they look to the total collection of cues in an environment to decode meaning and to structure their behaviour accordingly (Soloman, 1985). Bitner (1992) integrated the holistic meaning of the environment in her conceptualisation of servicescapes. The logical extension of this perception of the environment is the need to develop an environment with matching stimuli from the various environmental cues. Consequently, matching ambient scent to other environmental stimuli may lead to higher evaluations of the store environment, more positive behavioural responses and higher satisfaction levels than mismatching. This, no doubt, should provide a warning to service marketers that reliance on the pleasantness of the scent is not enough and that scent congruency may be a factor that overrides other scent dimensions (Bone and Jantrania, 1992; Ellen and Bone, 1998; Mattila and Wirtz, 2001; Mitchell, Kahn and Knasko, 1995; Spangenberg, Crowley, and Henderson, 1996).

Limitations

The links between the service environment, affect, and consumers' perceptions of waiting and overall service encounter evaluations are both a complex and unexplored topic. This study investigated the effect of ambient scent on consumers' perceptions of the service in a simulated environment. Whilst the simulated environment was seen by the subjects as clearly representing an

experience they would encounter in real life, their reactions to the scenario may not reflect their behaviour in a real service setting. A more significant limitation is the deliberate restriction of the number of variables being examined in this exploratory study. Several situational variables that have been found to influence consumers' waiting experience were excluded from the model including the degree of filled waiting time, wait-length information, and the consumers' goal-directed behaviour. Additionally, the study itself was limited to the study of a routine or low-cost wait. It is possible to extend the model to consider other situational variables, and other types of wait, including high-cost waits, in future studies.

Conclusions

Anecdotal evidence abounds that there is a connection between ambient elements of the environment (scent and music) and positive consumer reactions (increased sales, better evaluations). The limited academic research undertaken to date, does not, however, uphold the claimed perceived linkages (Bone and Ellen, 1999; Gulas and Bloch, 1995; Oakes, 2000). Clearly, there is something of a mismatch, at the moment, between practitioner 'gut feel' as to the consumer responses to scents, and the findings from academic research (Baron and Harris, 2002).

The study has raised some interesting questions for future research, and the relationships in this exploratory study should be tested again using a larger sample and in a real service context. Furthermore, the nature of the wait for service could be extended from a low-cost or routine wait to a high-cost waiting context, such as a healthcare environment where consumers are often experiencing negative emotions (see Lehrner, Eckersberger, Walla, Potsch, and Deecke, 2000). Alternatively, there are potentially many significant areas of study in examining how different service environmental cues together shape consumers' perceptions and behaviours (Wakefield and Baker, 1998).

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