

## **IS THE PLEASURE OF SCENT IN LUXURY STORE DIFFERENT THAN CONVENIENCE STORE?**

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### **Abstract**

*Ambient scent is a hidden stimulus for retailers. Not much has been researched on this. This paper attempts to study the differences in the effect of pleasure and skepticism aspect of scent on perception of buyers at luxury and convenience stores. A field experiment was conducted to study the impact of scent in the two store formats. This study uses a paired t test to find the significance in difference of the means. Pleasure is significantly different in two type of stores, while skepticism is partly so.*

**Key Words** – Scent, Pleasure, Skepticism, Atmospheric

### **Introduction**

The notion that atmospheric influence consumer behavior is widely accepted in the marketing literature, yet theory development is clearly limited in this area (Turley & Milliman, 2000). Past studies have examined the effects of individual pleasant stimuli such as music, color or scent on consumer behavior, but have failed to examine how these stimuli might interact.

It is suggested that to maximize these holistic effects, consumers need to perceive the arousing qualities of the scent (stimulating or relaxing) present in a Servicescape. Matching ambient stimuli might lead to higher evaluations of the store environment, more positive behavioral responses and higher satisfaction levels and then mismatching. We propose that the arousing quality of stimuli in a Servicescape is one dimension that effects this holistic evaluation. We test this proposition using pleasant ambient cues of scent. A paradigm representative of current olfactory research effects relevant to a retail setting was developed and the evidence supporting the paradigm have been examined.

### **Conceptual Background on Scent**

Researchers have generally differentiated scents along three different, although not necessarily independent dimensions (Spangenberg et al., 1996). They include the affective quality of the scent (e.g., how pleasant it is), its arousing nature (e.g., how likely it is to evoke a physiological response), and its intensity (e.g., how strong it is). Although scents can affect arousal levels (e.g., Lorig and Schwartz, 1988), to our knowledge, no prior research has investigated the arousing nature of a scent independent of its affective quality. Furthermore, prior studies have failed to explicitly measure scent presence effects on approach and avoidance behaviors (for a recent review on olfaction research see Bone & Ellen, 1999).

Retailers must clearly avoid unpleasant smells that gives rise to high state of arousal, and in all likelihood, avoidance behaviour (Ward 2003). Smell can be used as an ambience to influence the buying behaviour. Ambient scent is one of the stimuli that lead consumers to develop a holistic view of the store. It is also among the atmospheric cues of an outlet, and their evocative power is particularly strong (Daucé, 2000). Their influence on the store has been the subject of research in North America (Spangenberg, Crowley and Henderson, 1996). In France, Daucé (2000) analyzed the impact of diffusing ambient scents in a women's ready to wear store. Two scents were examined and the findings show the influence that diffusing scents can have on affective (pleasure), cognitive (evaluation of time spent, general evaluation of store) and behavioral (presence time) responses. It is noticeable that purchases (amount, number of items) were not influenced. There are many moderators influencing scent, which can be classified into two as individual characteristics (eg gender) and context effects (eg stressful task).

While music and light can be identified by certain primary characteristics like sound pressure level, luminosity, odour can be measured by quality and intensity. Quality refers to the effective tone of an odour (Takagi 1989) while intensity refers to the concentration of the odour (Takagi 1989).

Ambient scent is to be distinguished from non ambient scent. Ambient scent refers to scent that does not originate from any particular object but is present in the environment. Research on ambient scent has been less common (Bone & Ellen, 1994; Gulas & Bloch, 1995), but may be of greater interest to retailers and other service providers than product-specific scents. Ambient scent could affect perceptions of the store and its products, including those products that are difficult to scent (e.g., office supplies and furniture, Gulas & Bloch, 1995). Scholarly research on the effects of ambient scent has been limited. A notable exception is Spangenberg et al.'s 1996 study, which examined the impact of ambient scents in a simulated retail environment. The findings indicated that subjects had more positive evaluations and behaviors in the scented rather than the unscented environment. Unexpectedly, the type of scent did not matter, as even effectively neutral scents were able to generate enhanced perceptions. Furthermore, the intensity of the scent (within a reasonable range) failed to have an impact on the results. Two other empirical studies have examined the effects of ambient scent in a consumer behavior context. In the first study, subjects spent more time on a catalog-shopping task in scented than in unscented rooms (Bone and Ellen, 1994). The second study found that gamblers spent more money on slot machines when the casino was pleasantly scented than when it was not (Hirsch, 1995).

Research on cue congruency, or whether a scent is perceived as appropriate in a particular context, has produced mixed results. Scents that are inconsistent with the product tend to have a negative effect on product or ad evaluations (Mitchell, Kahn & Knasko, 1995; Ellen & Bone, 1999). However, only Bone and Jantrania's (1992) study provides direct support for a positive impact of cue congruency. In their investigation, adding a consistent scent enhanced consumers' evaluations of household cleansers and suntan lotions. Gulas and Bloch (1995) developed a conceptual model portraying ambient scent as an environmental cue that influences emotional responses and ultimately shopping behaviors. Similar to Mehrabian and Russell's framework, we posit in this model that scent influences consumer's perceptions of pleasure and arousal, which in turn affect behavioral responses to the environment.

**Prior Scent Marketing Studies**

<b>Source</b>	<b>Dependent Variable</b>	<b>Process</b>	<b>Impact</b>
Bone and Jantrania 1992	Overall Product evaluation	Alert Customers in case of incongruency	Disturbance of customer attention and choice
Mitchell et all 1995	Information Search, Product Choice	Gives access to stored information like memories or product class schemas	Cognitive Stimulation, greater depth of processing
Spangenberg et all 1996	Evaluation of store	Make customer forget time and enhance experience	Behaviural Reaction, increased length of stay
Chebat and Michon 2003	Pleasure, Mall Perception, Spending	When faced with incongruency, individuals will engage in more elaborate information searching.	No specific odour has no effect on shopper’s specific positive and perception of mall
Lunardo 2012	Skepticism, Pleasure, Integrity	Make customers customers suspect that retailers want them to buy more	Increased customer skepticism, decrease in pleasure

**The Present Study**

First of all, we investigated whether the presence of an ambient scent induces skepticism in a convenience store differently from a luxury store. In line with previous studies (Knasko, 1989), we expected to find no effect of an ambient smell on sales in general. In addition, we investigated whether an odour could function as a signal for pleasure to a customer differently in a convenient store and a luxury store. It has been hypothesized that odour would have no difference in skepticism and pleasure for a luxury store and a convenience store.

**Hypothesis Development**

The study also checks if there is a difference in demographic profile for luxury and economy stores.

Optimal arousal theory suggests that minor changes in the environment, such as adding a low level of scent or playing background music, increases the environment’s perceived novelty and pleasantness (Berlyne, 1971; McClelland et al., 1953). Consequently, we expect that adding either a pleasant scent or pleasant background music to the retail environment should enhance the perceived positive state of the store environment, including the amount of pleasure associated with it. Its impact would be the same for a luxury store and as well as a convenience store.

**Studies on Pleasure and Skepticism**

<b>Performance Measures</b>	<b>Alpha</b>	<b>Variables</b>	<b>Source</b>	<b>Impact</b>

Pleasure	0.96	Happy	Mehrabian & Russell 1974	Approach
		Pleased		
		Satisfied		
		Contented		
Skepticism inducing	0.91	Product Attractiveness	Lunardo	Avoidance
		Purchase		

**Skepticism-inducing**

Lunardo (2012) suggested in his research that ambient scent could be seen by consumers as a tactic used by retailers to persuade them to help retailers to achieve their corporate goals. He also suggested that such a tactic is likely to lead consumers to become skeptical about retailer’s motives. Eventhough evidence about the effects of ambient scents in the store environment on pleasure (Donovan and Rossiter, 1982, Ehrlichman and Halpern, 1988, Gulas and Bloch, 1995 and Spangenberg et al., 1996), it would be theoretically possible that consumers react to them not by feeling more pleasure but rather by developing negative reactions. He suggested that an ambient odor, if leading to skepticism toward retailer’s motives, could lead shoppers to react by behaving in the opposite way than the one wanted by the retailer. As a result, it was proposed that consumers in skepticism-inducing environment feel less pleasure than in a non skepticism-inducing environment. These questions have been re framed as in H<sub>1</sub> and H<sub>2</sub>.

H<sub>1</sub>: There is no difference between a luxury store and a convenience store in a customer buying things which he does not want because of the scent.

H<sub>2</sub> There is no difference in perception between a luxury store and a convenience store that a customer finds the product more attractive because of the scent.

**Pleasure**

It is assumed that ambient scent influences consumers’ mood through the arousal and pleasure dimensions. Russell and Pratt (1980) found that pleasure and arousal were independent dimensions. Berlyne (1971, 1974) hypothesized that arousal influences pleasure. The path from arousal to pleasure is verified in a number of marketing studies (Wakefield and Baker, 1998; Babin and Attaway, 2000; Eroglu et al., 1998). Pleasant feelings are not necessarily correlated with strong arousal (Dube’ et al., 1995; Spangenberg et al., 1998; Richardson and Zucco, 1989).

H<sub>3</sub> There is no difference of perception between a luxury store and a convenience store in a Scent making a customer happy.

H<sub>4</sub> There is no difference in perception between a luxury store and a convenience store that a customer is satisfied with the scent.

H<sub>5</sub> There is no difference in perception between a luxury store and a convenience store that a customer is contented with scent.

H<sub>6</sub> The customer is Pleasure with scent in a luxury store differently from that in a convenient store.

The measurement was done using a one item five point semantic scale. This scale was developed by Chebat. These measures were also used by Baker, Levy and Grewal (1992) experiment to determine the effects of social and ambient cues.

### **Research Methodology**

The study was located at the popular department stores in Delhi NCR, with the customers as the subjects. Six Hundred and Fifty Four (n=654) valid responses were collected from participants in the Delhi NCR region. Participants were instructed to complete an extensive questionnaire, in which they recorded their perceptions of store atmospherics of a store. The mode of contact was store intercept. The questionnaire which was adopted in this study required the respondents to rank perception attributes pertaining to odour for a luxury stores and convenience store on a Likert scale ranging from 1 to 5 (strongly disagree to strongly agree).

#### *Pretesting of questionnaire and measures*

A pilot survey was conducted on a sample of 30 respondents in the actual store environment. The results from the pilot test were used to adjust the scent intensity, and the music volume. In addition, feedback from the pretest sample was incorporated into the wording of the questions and the survey layout.

The intent of the questionnaires was to generate a store atmospherics for ambient scent perception profile for economy and luxury stores based on its users' responses to questions about their experiences in these environments.

### **Data Analysis**

A total of 654 customers were asked to participate in the survey. 6 were invalid responses. Of those valid, 324 were of the luxury stores and 324 of convenience stores. Nearly 75% of the respondents were female, and close to 65% were young people less than 20 years old. Taken together, these sample characteristics closely match the retail store's primary target markets. A paired t test for two independent samples was conducted to test the hypothesis. The variable is normally distributed and the mean is known. The two samples are independent of each other. Paired sample t-tests were conducted to shed light on the differences in the perception ratings of respondents. This specifically aims to compare the mean scores of each dimension of luxury stores and convenience stores.

The null hypothesis (Ho) is that there is no significant difference between the mean scores. On the other hand, the alternative hypothesis denotes that a significant difference exists between the mean scores.

As indicated in Table 1, a paired t test for two independent samples was conducted. Since the data collected on an interval scale, a parametric test was conducted to test if there was any significant difference in the liking for luxury vis a vis convenience stores for scent as an ambient factor. Individual differences between store types were investigated using t-tests. Throughout this paper,  $P < 0.05$  was used as the criterion for statistical significance.

**H<sub>1</sub>** There is no difference between a luxury store and a convenience store in a customer buying things which he does not want because of the scent.

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Li1	1.77	324	.813	.045
Ci1	1.81	324	1.026	.057

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 Li1 & Ci1	324	-.027	.625

**Paired Samples Test**

		Paired Differences				t	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Li1 - Ci1	-.040	1.327	.074	-.185	.105	-.544	323	.587

The result shows that impact of scent as a stimuli in purchasing behaviour in a luxury store is statistically not different from a convenience store.

**H<sub>2</sub>** There is no difference in perception between a luxury store and a convenience store that a customer finds the product more attractive because of the scent.

**Paired Samples Statistics Scent**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Ci6	1.84	324	.964	.054
Li6	2.36	324	1.122	.062

**Paired Samples Test**

	t	df	Sig. (2-tailed)
Pair 1 Ci6 - Li6	-6.245	323	.000

**Paired Samples Test**

		Paired Differences				t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference			

				Lower	Upper				
Pair 1	Li6 - Ci6	.525	1.512	.084	.359	.690	6.245	323	.000

The paired t test shows that that the result is not significantly different.

The impact of scent making a product more attractive is statistically different in luxury and convenience stores.

**H<sub>3</sub>** There is no difference of perception between a luxury store and a convenience store in a Scent making a customer happy

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Li3	4.36	324	.669	.037
Ci3	3.27	324	1.053	.058

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 Li3 & Ci3	324	-.003	.951

**Paired Samples Test**

	Paired Differences	t	df	Sig. (2-tailed)					
					Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference	
								Lower	Upper
Pair 1 Li3 - Ci3	1.090	1.250	.069	.953	1.226	15.693	323	.000	

The impact of scent making a customer happy is statistically different in a luxury store as compared to a convenience store.

**H<sub>4</sub>** There is no difference in perception between a luxury store and a convenience store that a customer is satisfied with the scent.

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Li14	3.09	324	.969	.054
Ci14	2.64	324	1.139	.063

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 Li14 & Ci14	324	.019	.728

**Paired Samples Test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Li14 - Ci14	.457	1.481	.082	.295	.619	5.552	323	.000

The level of satisfaction with scent is statistically different in convenience and luxury stores.

**H<sub>5</sub>** There is no difference in perception between a luxury store and a convenience store that a customer is contended with scent.

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Li20	3.27	324	1.132	.063
Ci20	2.55	324	1.108	.062

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 Li20 & Ci20	324	-.011	.847

**Paired Samples Test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			

Pair 1 Li20 - Ci20	.722	1.592	.088	.548	.896	8.164	323	.000
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The level of contentment with scent is statistically different in luxury and convenience stores

**H<sub>6</sub>** There is no difference in perception between a luxury store and a convenience store that a customer is pleased with scent.

**Paired Samples Statistics**

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 Li34	3.14	324	1.068	.059
Ci34	2.60	324	.976	.054

**Paired Samples Correlations**

	N	Correlation	Sig.
Pair 1 Li34 & Ci34	324	.012	.829

**Paired Samples Test**

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 Li34 - Ci34	.540	1.439	.080	.383	.697	6.758	323	.000

The level of Pleasure with scent is statistically different in luxury and convenience stores.

**Summary of Hypothesis tests**

Construct	Measures	Total number of tested paired relationships	Mean		Significance	Statistical significance in difference of perception of odour
			Luxury Store	Convenience		
Skepticism	Purchase	324	1.77	1.81	0.587	No
	Product Attractiveness	324	2.36	1.84	0.00	Yes
Pleasure	Happiness	34	4.36	3.27	0.00	Yes

	Satisfaction	324	3.09	2.64	0.00	Yes
	Contented	324	3.27	2.55	0.00	Yes
	Being Pleased	324	3.14	2.60	0.00	Yes

### **Conclusions**

In the present study, it has been found that there is no difference in purchase by a customer, due to the effect of scent in a luxury store as compared to a convenience store. Scent motivates a customer to purchase equally in a convenience and a luxury store. However the impact of scent on happiness, satisfaction, product attractiveness, contentment, pleased is different in luxury and convenience stores. A pleasant scent can help sell a product but its impact on customer's satisfaction, happiness, product attractiveness, contentment and Pleased towards scent is different in different stores. The research concludes that atmospherics has a great impact on the buyer's perception. Theoretically, this study has contributed to the existing theory by showing the atmospherics impact on the store composition for luxury retail and economy retail stores. More specifically, the retailers of this sector have to take consideration about some factors, for example scent in a luxury store to lower skepticism and create pleasure in a store environment.

### **Limitations**

The first limitation involves the use of a few retail stores in the field experiment. The context of this study were retail stores in Delhi NCR and hence, it can be argued that this type of a retail environment might be unique to metro town setup. Consequently, the extent to which our findings can be generalized across different types of service providers or retail stores need to be established. The second limitation concerns the use of single type of ambient cue. Combining other atmospherics, such as music, color schemes and layout, with scent might provide additional insight into how consumers perceive atmospherics. This study does not show if satisfaction, happiness, product attractiveness, contentment and Pleased towards scent is better or worse for a luxury store as compared to a convenience store. Olfactory information can be quite ambiguous unlike words, picture or sound. Scents are difficult to recognize and label (Schab 1991) and can produce false alarms (Engen 1972). The lack of clarity when interpreting odours is exacerbated by the fact that surrounding cues also affect customer's ability to detect and recognize odours (Davis 1981).

### **Managerial Implications**

This study provides evidence that improving a store's ambient conditions enhances consumers' evaluations and behaviors in the shopping experience. Strategically manipulating the environment's arousing qualities via scents can help luxury retailers to differentiate their stores from otherwise similar competitors. Moreover, appropriate aromas might positively encourage shoppers to engage in impulse buying. However, great care is needed to ensure that the effects of different environmental stimuli *match*. As this study has shown, consumers respond more positively towards the environment, when the stimuli match to provide a coherent ambience.

Because the novelty and stimulation of a particular scent might wear off relatively fast, retail stores that rely on heavy frequent visit patterns might not be prime candidates for this type of

environmental manipulation.

### **Further Scope**

A study can be done to find which type of store is impacted more by skepticism and pleasure. Constructs like Attitude, Integrity for odour can be measured. Combining other atmospherics, such as music, color schemes and layout, with scent might provide additional insight into how consumers perceive atmospherics.

### **References**

- Barry J. Davies, Dion Kooijman and Philippa Ward(2003): The sweet smell of success: Olfaction in retailing. *Journal of Marketing Management*, 19, pages 611-627
- Berlyne, Daniel E. (1971). *Esthetics and Psychobiology*. New York: Meredith.
- Bone, Paula F. and Pam S. Ellen (1994), "Olfaction and Marketing: Does it Make Sense to Use Scents?" unpublished working paper, Department of Marketing, West Virginia University.
- Bone, Paula F. and Pam S. Ellen (1999). Scents in the marketplace: explaining a fraction of olfaction, *Journal of Retailing*, 75(2), 243–262.
- Bone, Paula F. and Swati Jantrania (1992). Olfaction as a cue for product quality. *Marketing Letters*, 3(3), 289–296.
- Daucé B. (2000), La diffusion de senteurs d'ambiance au sein d'un lieu commercial: les premiers résultats d'une étude menée au sein d'un magasin de prêt-à-porter, XVIème congrès international de l'Association Française du Marketing, Montréal, Tome 2, 747-756.
- Ellen, Pam S. and Paula F. Bone (1999). "Olfactory Stimuli as Advertising Executional Cues," *Journal of Advertising*, 27(4), 29–39.
- Engen Trygg (1982). The perception of odors. New York: Academic Press
- Gulas, Charles S. and Peter H. Bloch (1995). "Right Under Our Noses: Ambient Scent and Consumer Responses," *Journal of Business and Psychology*, 10 (Fall), 87–98.
- Hirsch, Alan (1995). "Effects of Ambient Odors on Slot Machine Usage in a Las Vegas Casino," *Psychology and Marketing*, 12(7), 585–594.
- Knasko, S.C. (1989) Ambient odor and shopping behavior. *Chem. Senses*,14 ,718.
- Knasko, S.C. (1995) Pleasant odors and congruency: effects on approach behavior. *Chem. Senses*,20 , 479-487.
- L W Turley and Jean-Charles Chebat(2002): Linking retail strategy, atmospheric design and shopping behaviour, *Journal of Marketing Management*, 2002, 18, pages 125-144
- Lorig, Tyler S. and Gary E. Schwartz (1988). "Brain and Odor: Alteration of Human EEG by Odor Administration," *Psychobiology*, 16(3), 281–284.
- Lunardo Renaud (2012). Negative effects of ambient scents on consumers' skepticism about retailer's motives, *Journal of Retailing and Consumer Services*, Volume 19, Issue 2, March 2012, Pages 179-185,
- McClelland, David C., John W. Atkinson, Russell A. Clark and Edgar L. Lowell (1953). *The Achievement Motive*. New York: Appleton-Century-Crofts.
- Mitchell, Deborah J., Barbara E. Kahn and Susan C. Knasko (1995). "There's Something in the Air: Effects of Ambient Odor on Consumer Decision Making," *Journal of Consumer Research*, 22 (September), 229–238.
- Schab, F.R. (1990) Odors and the remembrance of things past. *J. Exp. Psychol.: Learn. Mem. Cognit.*, 16,648 -655

Spangenberg, Eric C., Ayn E. Crowley and Pamela W. Henderson (1996). "Improving the Store Environment: Do Olfactory Cues Affect Evaluations and Behaviors?" *Journal of Marketing*, 60(2), 67–80.

Takagi Sadayuki F (1989). *Human Olfaction*. Tokyo: University of Tokyo Press

Turley, L.W. and Ronald Milliman (2000). "Atmospheric Effects on Shopping Behavior: A Review of the Experimental Evidence," *Journal of Business Research*, 49, 193–211.

Wirtz Jochen and Mattila Anna S (2001). Congruency of Scent and Music as a driver of in store evaluations and behaviour. *Journal of Retailing*, 77, pages 273–289