

Sensorial Marketing for Those Who Can Wait non Longer

John Mc Donnell

Professeur, School of Advertisint, Marketing and Public Relations, Queensland University of Technology,
Brisbane, Australie

School of advertising, marketing and public relations
Queensland university of technology

GPO Box 2434 Brisbane QLD. 4001 Australia

TEL: 61 - 7 - 3300 - 4708 (H) OR 3864 - 1001

FAX: 61 - 7 - 3300 4708

j.mcdonnell@qut.edu.au

Abstract

Despite the best efforts of marketing communications to create a favourable image of a service organisation (or the service arm of a manufacturer), the first impression by the consumer of the organisation itself (as opposed to its advertising) may be a line of waiting, frustrated and possibly angry consumers. In addition to operations management, a few interventions have been explored to reduce the perceived waiting time and enhance the evaluation of the service. The paper discusses a new approach to reduce the wait time as perceived by the consumer. An experiment was conducted to determine the effect of a calming scent on customers waiting in a line.

Key Words: Waiting line – Queue - Customer service management – Marketing - Scent - Perceived wait time - Consumer behaviour – Time

INTRODUCTION

The service sector dominates modern economies, yet basic characteristics of services mean that queues or waiting lines cannot be avoided. One of the characteristics of services is that they cannot be stored or carried in inventory and that demand may be unpredictable (Zeithaml, Parasuraman and Berry 1985). This is also a substantial problem for manufacturers, which have had to turn increasingly to the service side of their business (e.g. with offers of after-sales service or toll-free help numbers) to differentiate themselves. The media have reported queue rage and telephone rage with increasing frequency (e.g. The Sunday Mail (Brisbane) May 10,1998, p16.

Despite the best efforts of marketing communications to create a favourable image of a service organisation (or the service arm of a manufacturer), the first impression by the consumer of the organisation itself (as opposed to its advertising) may be a line of waiting, frustrated and possibly angry consumers. Customer evaluation of many services is critically influenced by waiting time.

BACKGROUND AND PREVIOUS RESEARCH

Many studies have revealed the negative effect of queues on consumers (Katz, Larson and Larson 1991; Taylor 1994; Hui and Tse 1996, inter alia). It is common for consumers to overestimate the time that they spend waiting (Hornik, 1984; Katz, Larson & Larson 1991). As the perceived time of waiting increases, customer satisfaction typically decreases (Katz et al 1991).

Many firms have tried the obvious approach to the problem, which is managing the actual wait time through operations management, for example, modifying service delivery systems (Shostack 1987), conducting maintenance at night, or differential pricing to shift demand, (see Maister 1985; Taylor 1994,1995). However the frequency of queues attests to the limits of operations management.

If the organisation cannot control the actual duration of the wait, then it should consider how it might manipulate the perceived wait time. As Taylor (1994) and others have observed, the perceived wait time is often different from the actual wait time. This means that understanding the

factors which influence perceptions of waiting, and their subsequent influence on consumer behaviour, provides valuable clues to strategies for marketing communications.

Apart from operations management (making changes to reduce the actual waiting time), previous studies on waiting and its effects on customer satisfaction have tended to focus on customer perceptions of the wait and how this might be affected by:

- Filled wait time: providing distractions or activities (Taylor 1994)
- Service provider control: can the firm be blamed for the delay; (Tom and Lucey,1995; Taylor,1994; Baker and Cameron 1996)
- Waiting duration or queuing information: providing feedback on how long the delay is expected to be; (Hui and Tse 1996)
- Lighting, colour, music, temperature (Baker and Cameron 1996)
- Music (Baker and Cameron 1996, Chebat, Gelinas-Chebat and Filiatrault 1993);
- Attribution of the cause of wait (Baker and Cameron (1996), and Taylor 1994).

AMBIENT SCENT IN MARKETING ENVIRONMENT

One factor may be relevant but has not been tested, or even discussed, in the literature on waiting for service. A great deal has been published on the effect of the sense of smell on evaluations and behaviours, but little in the marketing environment, especially regarding ambient or environmental scent, as opposed to the scent attached to a particular object.

For many years, retailers have enhanced their sales by the aroma of freshly ground coffee or freshly baked bread and bakery goods. However this was a fortuitous by-product of activities conducted in the shop. Some supermarkets have taken this a step further by blowing the bakery air (from an in-store bakery) down the aisles to attract the interest of shoppers. In recent years new technology has facilitated a completely new approach which introduces scents into the retail environment (and not only food stores) to promote consumer interest. This might include the odour of coconut oil in a travel agency or the fragrance of leather in a new car showroom. The approach was developed in Japan and tested in Britain by a company called Marketing Aromatics in over 100 stores.

Humans have come to depend on other senses with the result that smell has become rather neglected, and consequently poorly developed. Dogs have a sense of smell 100 times greater than that of humans and are very focused on this sense, while in humans it only becomes well developed when a human loses their sense of sight for instance. It is

well known that salmon can return to the precise location where they began life after many years spent at sea. This is possible because the brains of the baby salmon are imprinted with the unique combination of odours generated by the animal, vegetable and mineral components of their nursery. Another species of fish called mouthbreeders are able to distinguish their own offspring from the offspring of other members of their species by smell. Agitated fish and tadpoles produce a warning odour or "fright substance" which, even at very low concentrations, causes members of the species to flee the danger zone. Sheep recognise members of their own flock by smell and almost all mammals use marking scents to define territories. While smell is taken for granted by humans, it can still be quite sensitive. If a strawberry is crushed, a few of the 35 chemicals that define the aroma of a strawberry are changed and the human nose can detect the subtle change in odour (Gould 1993). Moreover, the part of the brain that handles signals from the smell or olfactory nerves has a powerful effect on the autonomic nervous system and on human emotions.

In the above literature review on waiting for service it has already been noted that the senses of sound and sight have been utilised in research on reactions to waiting and perceived wait time. It is then ironic that the sense of smell has not been investigated in this context, because of all the human senses, the olfactory sense has by far the greatest impact on people's emotions. The limbic system is the most primitive part of our brain and the seat of immediate emotions. Some odours provoke basic emotional reactions because the olfactory lobe is actually part of the limbic system (Hirsch 1991 and 1992). The nose is directly connected to the olfactory lobe and the limbic system. More than any other sense, smell taps into the feelings marketers want to tap (Wilke 1995). Studies by Hirsch (1991 and 1992) found that certain scents, even in fairly low concentrations can affect peoples' moods. Concentrations so weak that they are below the threshold of consciousness, still affect peoples' moods subconsciously. Moreover, in Japan, a clockmaker sells an alarm clock that arouses the sleeper by scenting the room with an aroma formulated to stimulate alertness.

A report in the Journal of Marketing (Spangenberg, Crowley and Henderson, 1996) found that pleasant scents or aromas in a retail environment:

- Improve the perception of customers as to the evaluation of the store;
- Improve the perception of customers as to the store environment;
- Improve the perception of customers as to merchandise and specific products;

- Improve customer intentions to revisit the store and to purchase.

Of particular relevance to the present study, the report found that customers perceived that they were in the store for a lesser period than actual when a store was scented. The difference between actual and perceived time was statistically significant ($p=.01$). Although actual time spent did not vary, perceived time seemed to pass more slowly in the unscented environment. Spangenberg et al investigated the effect of scent on customers browsing in a store when they presumably are not angry or stressed. Does scent still work if they are waiting in a line in that store for 15 minutes, becoming angry and frustrated?

RESEARCH QUESTIONS

Basic research questions concern :

- What is the effect of pleasant smells when customers are waiting for service?
- Does the intervention of a pleasant scent reduce the anger experienced by customers waiting for service?
- Does the intervention of a scented environment improve customer perceptions of the overall service level provided?

HYPOTHESES

H1: That the use of a calming ambient scents (mostly lavender, blended with sagebrush and nutmeg, in an environment where customers are waiting for service, reduces the level of anger felt by those customers;

H2: That the use of pleasant ambient scent in an environment where customers are waiting for service, enhances service evaluations;

METHODOLOGY

A survey was developed and tested to capture the immediate mood of the subject using measures that have been used in previous research and found to be reliable. Based on previous research, it is expected that certain individual emotions, described here as "discomfort" will affect service evaluations. The items used as measures for the construct of discomfort were drawn from a number of different scales (Batra and Ray 1986, Edell and Burke 1987, Holbrook and Batra 1987) and measured on a 7 point scale, anchored by 1= "not at all "and 7= "very" (Holbrook and Batra 1987). They are similar to those used by Taylor and Claxton (1994). The survey also included several questions on service evaluation that were adapted from the SERVQUAL measure (Zeithaml and Bitner 1996). Perceived time was not measured, not only because

it was impractical in this experiment but also because the researcher was more interested in the evaluation of service and mood.

The surveys were distributed in an Australian government service centre where drivers' licences and car registrations are issued. This was chosen as a result of focus group research which identified these service centres as locations where focus group participants experienced long waits and became irritated by those waits. The researcher distributed surveys only when the wait experienced by customers exceeded 10 minutes. In the first sample of 200 cases, the control group, no intervention was applied. These results were then compared to an experimental group of 200 cases where a commercial sized device emitting a lavender scent was installed. Lavender was chosen due to its reputed calming qualities. A model was developed and tested with LISREL (software for structural equation modelling). Problems with a multi-sample analysis using LISREL led to the use of MANCOVA (multivariate analysis of covariance) to compare the control and experimental groups.

RESULTS

In order to evaluate the effect of the scent intervention, a multivariate analysis of covariance (MANCOVA) was conducted. The fixed or independent variable was context or intervention. In the tables below (table 1 & 2) the control case was context 1, scent was context 2. The dependent variables are service evaluation and anger.

Table 1 - MANCOVA Estimated marginal means: Context Estimates

		Mean	Std. Error
Dependent Variable	CONTEXT		
Service evaluation	1 Control	3.7	.076
	2 Scent	3.4	.077
Anger	1 Control	3.79	.128
	2 Scent	4.1	.130

Table 2: MANCOVA Pairwise Comparisons (Context estimates)

			Mean Difference (I-J)	Std. Error	Statistical Significance
Dependent Variable	(I) CONTEXT	(J) CONTEXT			
Service evaluation	1	2	.303*	.109	.017
	2	1	-.303*	.109	.017
Anger	1	2			.232

Based on estimated marginal means

* The mean difference is significant at the .05 level.

a Adjustment for multiple comparisons: Bonferroni.

The results show that adding only scent to the environment increases the customer evaluation of service. This result is statistically significant at the $p=0.05$ level (0.017).

In table 1 “Estimated Marginal Means: Context estimates”, the mean for service evaluation declines from context 1 (control) to context 2 (scent). The mean falls from 3.7 to 3.4. A lower score on this scale represents a higher rating of service. On the scale for anger, a lower score represents a higher reported level of anger. The mean scores for anger increased from 3.7 in the control case to 4.1 for scent. This represents a fall in anger but it was not statistically significant (0.232).

The first hypothesis was “That the use of ambient scents in an environment where customers are waiting for service, reduces the level of anger felt by those customers;”

The second hypothesis was “That the use of pleasant ambient scent in an environment where customers are waiting for service, enhances service evaluations;”

Although there was a decrease in anger, it was not statistically significant. However, the second hypothesis is clearly supported.

CONCLUSION

The principal focus of the research was to investigate whether simple changes to the environment where a service is being delivered affect customer emotions and evaluation of the service. The marketing literature has not included any study on the use of scent as a tool for the marketer whose customers must wait in line. Are groups who were exposed to a pleasant scent or

music more likely to report lower levels of discomfort while waiting in line for the service? Of more immediate interest to service marketers, are groups that experienced pleasant scent stimulus while waiting more likely to evaluate service levels more favourably than a control group that did not experience a scent?

The results show that adding scent to the environment increases the customer evaluation of service. In the case of anger, scent does reduce the level of anger reported by the customer but scent does not make a significant difference to the reported level of anger. In any event, the evaluation of service may be of more importance to the marketer than the level of anger.

The addition of a calming scent to the service environment, while customers are waiting for service for an extended period of time, appears to result in a higher evaluation of service. This was based on a composite of five different measures of service evaluation.

We can only speculate on the reason that scent has this effect. Other research suggests that scent has an effect on our emotions, and presumably this includes the mitigation of anger. We also know that some interventions (e.g. video and music) are effective because they distract the customer. This may be a factor with scent, but the scent in this experiment was almost imperceptible.

Just as the reactions of customers to waiting vary by country and culture, so do our reactions to the same scent. A question for further research is whether the same scent has a similar effect on waiting customers in different countries and the

author invites interested researchers to pursue this issue.

BIBLIOGRAPHY

- Aaker, D. *Managing Brand Equity* New York Free Press 1991
- Baker-Julie; Cameron-Michaëlle (1996) "The effects of the service environment on affect and consumer perception of waiting time: An integrative review and research propositions" *Journal-of-the-Academy-of-Marketing-Science*. Fall 1996; v24n4, pp. 338
- Baldinger, A. & Rubinson, J. "Brand Loyalty: The Link Between Attitude and Behaviour" *Journal of Advertising Research* Nov/Dec 1996
- Barrett-Colleen (1993) "Giving customers P.O.S." *Sales-and-Marketing-Management*. Nov v145n14, p. 52
- Bitner, M.J. (1990), "Evaluating service encounters: the effects of physical surroundings and employee responses", *Journal of Marketing*, Vol. 54, pp. 69-82
- Bitner, M.J. (1992), "Servicescapes: The impact of physical surroundings and employee responses", *Journal of Marketing*, 56 (2) 57-71
- Bitran-Gabriel; Lojo-Maureen (1993) "A framework for analyzing the quality of the customer interface" *European-Management-Journal*. Dec 1993; v11n4, pp. 385-396
- Bone, Paula and Pam Scholder Ellen (1994) "Olfaction and Marketing: Does it make sense to use scents? Unpublished Working Paper, West Virginia University.
- Chebat. J.C. and Filiatrault, P. (1993), "The impact of waiting in line on consumers", *International Journal of Bank Marketing*, Vol. 11 No. 2, pp. 35-40
- Davis-Mark-M; Vollmann-Thomas-E (1990) "A Framework for Relating Waiting Time and Customer Satisfaction in a Service Operation" *Journal-of-Services-Marketing*. Winter 1990; v4n1, pp. 61-69
- Folkes, V., Koletsky, S. and Graham, J.L. (1987), "A field study of causal inferences and consumer reactions: the view from the airport", *Journal of Consumer Research*, Vol. 13, pp. 534-9.
- Friedman-Hershey-H; Friedman-Linda-W (1997) "Reducing the "wait" in waiting-line systems: Waiting line segmentation" *Business-Horizons*. Jul/Aug 1997; v40n4, pp. 54-58
- Hirsch, Alan R. and S.E. Gay (1991), "The Effect of Ambient Olfactory Stimuli on the Evaluation of a Common Consumer Product", presentation at the thirteenth annual meeting of the Association for Chemoreception Sciences.
- Hirsch, Alan R. and S.E. Gay (1992), "The Effect of Ambient Odour on Slot Machine Usage in a Las Vegas casino", unpublished report, Smell and Taste Treatment and Research Foundation Ltd. Chicago, Illinois.
- Hirsch, I.R., Bilger, R.C. and Heatherage, B.H. (1950), "The effect of auditory and visual background on apparent duration", *American Journal of Psychology*, Vol. 69, p. 561
- Hornik, J. (1984), "Subjective vs objective time measures: a note on the perception of time in consumer behavior", *Journal of Consumer Research*, Vol. 11, June, pp. 615-18.
- Hui, Michael K. and Tse, David K., "What to tell consumers in waits of different lengths: An integrative model of service evaluation" *Journal of Marketing* April 1996 v60n2 81-90
- Katz-Karen-L; Larson-Blaire-M; Larson-Richard-C (1991) "Prescription for the Waiting-In-Line Blues: Entertain, Enlighten, and Engage" *Sloan-Management-Review*. Winter 1991; v32n2, pp. 44-53
- Klapp, Orrin E. (1986), *Overload and Boredom*. New York: Greenwood Press
- Larson, R. (1987), "Perspectives on queues: social justice and the psychology of queuing", *Operations Research*, Vol. 35 No: 6, pp. 895-905.
- KostECKI-Michel (1996) "Waiting lines as a marketing issue" *European-Management-Journal*. Jun 1996; v14n3, pp. 295-303
- Larson-Richard-C (1988) "There's More to a Line than Its Wait" *Technology-Review*. Jul 1988; v91n5, pp. 60-67
- Larson-Richard-C (1987) "Perspectives on Queues: Social Justice and the Psychology of Queueing" *Operations-Research*. Nov/Dec 1987; v35n6, pp. 895-905
- Levitt, Eugene (1980), *The Psychology of Anxiety*. Hillsdale, NJ: Lawrence Erlbaum Associates, Inc
- McDonald, William J. (1994) "Time Use in Shopping: The Role of Personal Characteristics", *Journal of Retailing*, Vol. 70, No. 4 Winter
- Maister, D.H. (1985), "The psychology of waiting lines", in Czepiel, J., Solomon, M.R. and Surprenant, C.F. (Eds), *The Service Encounter*; Lexington Books, Lexington, MA

- Oliver, R.L.(1980), "A cognitive model of the antecedents and consequences of satisfaction decision", *Journal of Marketing Research*, Vol. 17, November, pp. 460-9
- Oliver, R.L. and DeSarabo, W.S. (1988), "Response determinants in satisfaction and related postpurchase measures", in Day, R.L. and Hunt, H.K. (Eds), *New Findings in Consumer Satisfaction and Complaining Behavior*; School of Business, Bloomington, IN
- Osuna, Edgar Elias (1985), "The Psychological Cost of Waiting," *Journal of Mathematical Psychology*, 29, 82–105
- Parasuraman, A., V. Zeithaml, and L. Berry (1985), "A Conceptual Model of Service Quality and its Implications for Future Research," *Journal of Marketing*, 49 (4), 41–50
- Robinson, John and Godbey, Geoffrey (1997) *Time for Life: The Surprising Ways Americans Use Their Time*, University Park, PA: The Pennsylvania State University Press
- Settle, Robert B. and Pamela L. Alreck (1977), "Time Orientation and Consumer Attitudes," in *Contemporary Marketing Thought, 1977 Marketing AMA Educators Proceedings*, Barnett A. Greenberg and Danny Belanger, eds. Chicago: American Marketing Association,
- Shostack, G.L. (1985), "Planning the service encounter", in Czepiel, J.A., Solomon, M.R. and Surprenant, C.E (Eds), *The Service Encounter*; Lexington Books. New York, NY, pp. 243-54.
- Spangenberg, Crowley and Henderson, (1996) "Improving the Store Environment: Do Olfactory Cues Affect Evaluations and Behaviours", *The Journal of Marketing*, April 1996.
- Srull, Thomas (1983), "Affect and Memory: The Impact of Affective Reactions in Advertising on the Representation of Product Information in Memory," in *Advances in Consumer Research*, 10, Richard Bagozzi and Alice Tybout, eds. Ann Arbor, MI: Association for Consumer Research, 520–25
- Taylor, S. (1994), "Waiting for service: the relationship between delays and evaluations of service", *Journal of Marketing*, April, pp. 56-69
- Taylor, S. (1995), "The effects of filled waiting time and service provider control over the delay on evaluations of service", *Journal of the Academy of Marketing Science*, Vol. 23, pp. 38-48
- Tom-Gail; Burns-Michael; Zeng-Yvette (1997), "Your life on hold: The effect of telephone `waiting time on customer perception", *Journal-of-Direct-Marketing*. Vol. 11 no. 3 Summer 1997;
- Tom-Gail; Lucey-Scott (1995) "Waiting time delays and customer satisfaction in supermarkets" *Journal-of-Services-Marketing*. 1995; v9n5, pp. 20-29
- Tse, D.K. and Wilton, P.C. (1988), "Models of consumer satisfaction formation: an extension", *Journal of Marketing Research*, May, pp. 204-12
- Weiner, B. (1985), "An attributional theory of achievement motivation", *Psychological Review*, Vol. 92, pp. 548-73
- Wilke, Maxine (1995), "Scent of a Market", *American Demographics*, August 1995.
- Zeithaml, V., Parasuraman, A. and Berry, L.L. (1985), "Problems and strategies in services marketing", *Journal of Marketing*, Vol. 49, Spring, pp. 33-46