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## **FUNCTIONAL DENSITY AND ITS IMPACT ON RETAIL SATISFACTION IN CROSS-CULTURAL CONTEXTS: CAN CROWDED STORES BE A GOOD THING FOR RETAILERS?**

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*Most research on crowding has focused on the negative aspects of crowding in a national context. This paper aims to extend the literature by providing a more unified and balanced model of crowding by including both positive (functional) and negative (dysfunctional) types of density and their impact on satisfaction in multicultural settings. We therefore include two important moderators: (1) cultural tolerance for crowding and (2) situational context. The two situational contexts investigated are (1) hedonic (experiential) and utilitarian situations and (2) pre-process (e.g. waiting in line) and in-process or consumption situations (baseball stadium). Propositions and directions for future research are also discussed.*

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## INTRODUCTION

Crowding has emerged as a very important area in retailing research (Eroglu and Harrell, 1986; Hui and Bateson, 1991). Numerous studies have been conducted on crowded retail stores and how they impact consumers. Studies on crowding have investigated its influence on emotions (Hui and Bateson, 1991), shopping satisfaction (Eroglu and Machleit, 1990; Machleit, Eroglu and Mantel, 2000), time spent in the store (Harrell, Hutt and Anderson, 1980), interpersonal behavior (Hui and Bateson, 1991, and re-patronage intentions (Wakefield and Blodgett, 1994). These studies and most studies within marketing have focused on the negative aspects of crowding while neglecting the positive aspects of crowding. However, as research has shown, crowds can also be a good thing for businesses (Anderson, Kerstetter and Graefe, 1998; Foxall and Goldsmith, 1994).

Despite most studies focusing on negative results from crowding, there are a few studies that have looked at or found positive aspects in crowded retail environments. Eroglu and Harrell (1986) were the first in marketing to discuss a positive side of crowding and introduced the concept of functional density, the density which is perceived as positive and helpful for realizing goals. Other researchers have also begun to look at the positive aspects of crowds and crowding. A study by Tse, Sin and Yim (2002) found that crowded restaurants were associated with higher levels of reputation and perceived food quality. Pons, Laroche and Mourali (2006) found that a crowded hedonic situation produced positive responses from consumers. Additional studies have also shown that large crowds draw and attract more people (Miligram, Bickman and Berkowitz, 1969; Newton and Mann, 1980). Many other academic fields such as environmental psychology, tourism, and event planning have also found positive effects from crowds (Mowen, Vogel song and Graefe, 2003; Ditton, Fedler and Graefe, 1983; McClland and Auslander, 1978). Thus, crowds and crowding are not always a bad thing and may even provide great benefits in certain business situations.

This paper aims to provide a unifying model of previous crowding research by including both functional (positive) and dysfunctional (negative) types of density and examine the importance of crowding in an international multicultural context. It aims to study the importance of two previously neglected moderators: (1) the cultural tolerance for crowding and (2) the situational context.

Culture has emerged as a very important moderator of perceptions of density and responses about crowded situations (Pons and Laroche, 2007) and thus the study of cultural tolerance may help to further explain this phenomenon. As retail business expands internationally, it is very important to study how different cultures respond to crowding. In the past, retailing was the least international business activity with most retailers limiting their business activities to their national markets. Research on crowding was only studied within the context of

one national culture. However, recent international expansion of retailers has made crowding issues a very important area for inquiry and international marketing research. Retailers selling in countries with different cultural backgrounds must understand how their new customers will react to crowded environments. If consumers in different countries react differently to crowded situations, then retailers expanding internationally have to design their stores in accordance to the tolerance for crowded spaces exhibited by that specific society. A crowded retail store can generate negative reactions in some cultures, especially where individuals have a high need for personal space, while in other cultures the same crowded store may produce positive feelings. Understanding how international customers will react to crowded retail stores is a very important topic for businesses and researchers.

Different consumer situations (e.g. a sporting event vs. a retail store) have been shown to produce different perceptions of density and different responses to crowding (Eastman and Land, 1997; Price, Arnould and Deibler 1995). However, research has not examined whether these different consumer situations produce similar reactions when people from different cultural and national backgrounds are involved in the situation. In particular this study will investigate (1) hedonic (experiential) and utilitarian situations and (2) pre-process (e.g. waiting in line) and in-process or consumption stages (sporting event) in different cultural and national contexts. Both cultural tolerance and situational context have the capability to influence a consumer's satisfaction with the retail environment. These relationships are illustrated in Figure 1.

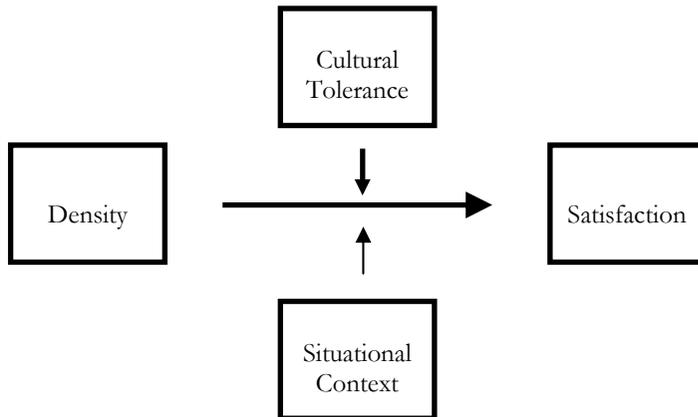


Figure 1. Density Satisfaction Model

## DENSITY AND CROWDING

In order to understand how crowding affects consumers, it is important to first define and explain the construct of density. Density can be defined as the number of people and/or objects in a given space (Drintewater and Gudjonsson, 1989). Density is an antecedent condition of crowding and it plays a central role in the appraisal of crowding (Eroglu and Machleit, 1990; Sundstrom, 1978). Density is a physical condition of the environment while crowding is a response or appraisal of the environment (Eroglu and Machleit, 1990; Stokols, 1972). Crowding has also been considered a state of psychological stress (Stokols, 1972). In sum, density is an objective measure while crowding is subjective to the individual and the environment.

Because crowding is subjective to the individual and the situation, a high density situation may not result in the negative and stressful outcome called crowding. Instead, it may result in a positive outcome called functional density (Eroglu and Harrell, 1986). According to Eroglu and Harrell (1986), retail density may not lead to feelings of crowding if the amount of perceived density is evaluated as being functional. They conclude that density may lead to dysfunctional density (labeled as crowding) or to functional density. Thus, the outcomes of density can be positive (functional) or negative (dysfunctional) depending upon the individual and the situation. See Figure 2.

The theoretical underpinning for positive and negative outcomes of density can be found in arousal theory (Evans and Lepore, 1992). According to arousal theory, arousal has a curvilinear effect on individuals with high and low levels of arousal leading to negative results and medium arousal leading to positive results (Hebb, 1972; Singh, 1998). This inverted U relationship is also called the Yerkes-Dodson Law. According to Seyle (1956) both low and high levels of stressors are dysfunctional and medium levels are functional. Thus, there is a "eustress" at intermediate levels and "distress" at low and high levels of stress (Singh, 1998).

When applying arousal theory to density and crowding, it is apparent that there are three different levels of density (high, medium, and low) and that each of these levels may have different outcomes. From arousal theory, it is predicted that low and high density will result in negative outcomes while medium density will result in positive outcomes. Arousal theory may help explain why there are both positive and negative effects of crowding and density in the literature. Some studies may have looked at high density situations while other studies have looked at medium density situations and thus the results are different. An example is the study by Mowen et al. (2003) which contends that its positive

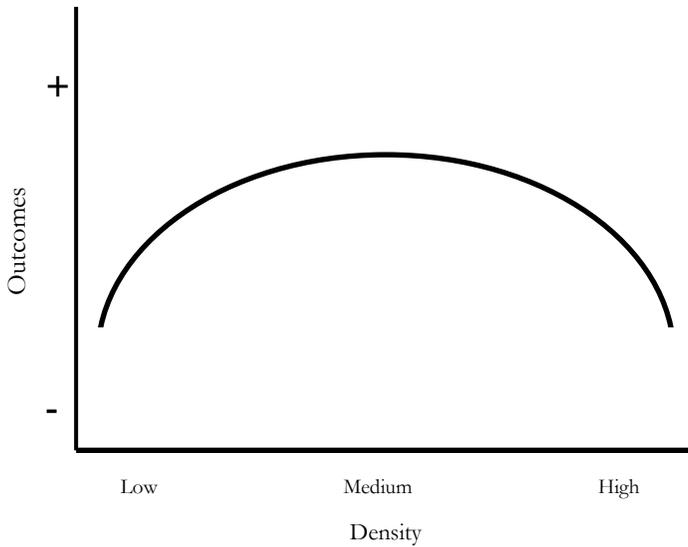


Figure 2. Relationship of Density to Outcomes

findings from crowding at a festival may be due to modest attendance at the event. It is also important to note that arousal theory predicts that low levels of density will cause a negative outcome and thus the lack of a crowd may be bad for retailers or businesses.

A very important outcome variable for retailers is satisfaction with the retail experience (Oliver, 1993). The relationship between density and satisfaction has been the focus for most crowding studies (Harrell et al., 1980; Eroglu and Harrell, 1986; Machleit, Kellaris and Eroglu, 1994). Most studies that have investigated density and crowding have found a negative relationship between high density and satisfaction (Machleit et al., 2000; Pons and Laroche, 2007). However, these crowding studies only compared satisfaction levels between high and low density situations and neglected medium density situations. According to arousal theory, medium stimulation and/or stress from the environment may lead to positive outcomes and therefore should be investigated. It is also important to note that these past studies have shown low density to result in higher satisfaction levels when compared against high density situations. However, low density situations may actually produce less satisfaction when compared against medium

density situations. According to arousal theory, low and high density will result in lower satisfaction while medium density will result in higher satisfaction.

*Proposition 1a: Low density will lead to low levels of satisfaction with the retail experience.*

*Proposition 1b: Medium (functional) density will lead to high levels of satisfaction with the retail experience.*

*Proposition 1c: High (dysfunctional) density will lead to low levels of satisfaction with the retail experience.*

*Proposition 2: Medium density will lead to higher levels of satisfaction than low density situations.*

## **CULTURAL TOLERANCE FOR CROWDING**

The literature on crowding and density has shown that different density levels affect individuals differently in terms of perceptions of crowding. According to Baum and Paulus, “in some conditions and for some people, a given level of density may lead to crowding while in other conditions or for other people it may not” (1987: 534). One reason for this difference in outcomes and perceptions of crowding is culture.

Culture has been shown to influence perceptions of density and evaluations of crowded situations (Pons et al., 2006). According to Iwata (1992), the state of being crowded differs from culture to culture. Culture has been shown to produce different responses to high density situations. A study of American and German students found that distance to other people and the number of people produced different discomfort levels among the two groups of students (Six, Martin and Pecher, 1983). Pons and Laroche (2007) found that crowding had a bigger impact on a Canadian’s shopping experience than on a Mexican’s shopping experience. Research on culture and privacy has shown that some cultures have a stronger preference for privacy (Altman and Chemers, 1980). Thus, culture is an important factor for differences in crowding perceptions and outcomes.

One neglected area of research on crowding and culture is the tolerance for crowding among cultures. Tolerance for crowding is different than perceptions of crowding. Tolerance for crowding is defined as the ability to tolerate high density conditions (Evans, Lepore and Allen, 2000; Machleit et al., 2000). Individual tolerance for crowding has been found to influence perceptions of crowding and shopper satisfaction (Machleit et al., 2000). From a cultural perspective, different

groups may define their own norms and ranges of acceptable density and thus have different tolerance levels (Laroche and Pons, 2007).

Cultural tolerance can be explained by proxemic and collectivist theory. According to Hall (1966), proxemic theory is based on the premise that residents of contact culture (e.g. Latin, Asian, Arab) prefer closer interpersonal distances than noncontact cultures (e.g. Northern European, North American). Thus, cultures that prefer to interact at larger interpersonal distances will be less tolerant of crowding. Collectivist theory also supports cultural differences in tolerance for crowding. Collectivist cultures are tightly linked individuals who aspire to connect with members of their collective group such as family, region, or nations and they also like to do things with others (Evans et al., 2000; Wu and Luan, 2007). Unlike collectivist cultures, Individualistic cultures desire independence and personal goals. Collectivistic theory posits that collectivist cultures will be more tolerant of crowding in comparison to individualistic cultures. Overall, individuals from high contact, collectivistic cultures prefer closer and more social interactions and thus will be more tolerant of crowding.

*Proposition 3a: High contact cultures will be more tolerant of high density situations than low contact cultures.*

*Proposition 3b: High collectivistic cultures will be more tolerant of high density conditions than low collectivist cultures.*

## SITUATIONAL CONTEXT

Situational context may also play a role in how density affects satisfaction. Crowding occurs in many different settings ranging from a retail store to a sporting event. However, these situations are not the same. Some situations may be hedonic (experimental) while others may be utilitarian (Fiore and Kim, 2007; Raghunathan and Corfman, 2006). Hedonic experiences are defined as fun, amusing, exciting, and pleasurable while utilitarian experiences are task oriented with satisfaction coming from achieving the goal (Babin, Darden and Griffin, 1994; Holbrook, Chestnut, Oliva and Greenleaf, 1984).

Most crowding research has been conducted in utilitarian settings such as a retail store or bank while neglecting hedonic settings (Pons et al., 2006). Research in utilitarian settings has produced negative results from crowding (Machleit et al., 2000) but the few studies on density in hedonic situations has produced positive results. For bars, baseball games, and discos, researchers found that crowds played a significant role in enhancing the experience and increasing the satisfaction (Eastman and Land, 1997; Price et al., 1995; Pons et al., 2006). Some hedonic situations may need crowds in order to produce the desired experience (Tse et al., 2002). Many consumers will actively seek out high density environments such as athletic events and bars (Eroglu and Harrell, 1986). Thus,

situation context may influence how density affects satisfaction with hedonic situations producing positive results and utilitarian situations producing negative results. Moreover, the possibility exists that the differentiation between hedonic and utilitarian settings may be influenced by a specific culture. A retail situation that is classified as utilitarian in one culture may be perceived as hedonic somewhere else. Therefore retailers expanding abroad have to pay extra attention to which situations a particular culture classifies as utilitarian and hedonic.

*Proposition 4: Crowding in a hedonic situation will increase satisfaction and crowding in a utilitarian situation will decrease satisfaction.*

*Proposition 5: There is a difference in the situations that different cultures are classifying as hedonic and utilitarian.*

Another situation variable that may influence how density affects satisfaction is stage of the encounter. There are three stages: (1) Pre-process, (2) In-Process or Consumption, and (3) Post Process. Literature on waiting in queues has shown that pre-process and post process waits feel longer than in process waits (Maister, 1985). Consumers are more patient during the consumption stage (Lovelock and Wright, 2002) and thus may be less affected by density. Mowen et al., (2003) found that consumers waiting in line for a product (pre-process stage) had negative perceptions of crowding while consumers who were watching the concert had positive perceptions of the crowd. Thus, crowding during the pre-process stage may lead to less satisfaction than crowding during the consumption stage.

*Proposition 6: Crowding during the pre-process stage and the after-process stage will have lower satisfaction scores than crowding during the consumption stage.*

## CONCLUSION

Research on crowding has produced mostly negative results. However, crowding can be a good thing for businesses. Crowding may attract customers (Miligram et al., 1969), enhance image of store (Tse et al., 2002), and increase confidence of store choice (Eroglu and Harrell, 1986). Some individuals may see crowding as positive and functional especially in some situations. Crowding may not be as bad as some people and businesses think.

This paper chose to look at the positive and negative aspects of crowding and thus provided a more comprehensive model of density and satisfaction. The model went beyond previous research and included three different density levels instead of two density levels. Most studies have compared high and low density

situations but medium density has the possibility to produce a positive outcome instead of a negative outcome. More importantly, the model included culture, situational context, and the influence of culture on the situational context as moderators of the density-satisfaction relationship. It is very important for retailers expanding internationally to study extensively the crowding expectations of consumers in different countries. For example, a non-crowded retail environment that may be desirable and successful in a country where consumers have a high need for personal space, may not be the appropriate format in a country where consumers have a lower need for personal space. In that particular environment, consumers may demand a more crowded retail environment in order to be satisfied. A non-crowded environment may be perceived as cold and impersonal and may decrease the amount of satisfaction associated with the shopping experience.

Culture can also play a major role in the classification of certain activities as hedonic or functional. An activity that is perceived as “fun” in one culture and requires a crowded retail environment in order for consumers to feel the maximum level of satisfaction may be classified as “utilitarian” in another culture, requiring a non-crowded retail environment.

Overall, this paper showed how and when crowding could lead to increased consumer satisfaction. Further research and testing of the propositions stated in this paper is needed to examine how different cultures perceive crowded retail environments and the ideal crowding required to maximize satisfaction in a “hedonic” or “utilitarian” retail environments.

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