The Influence of a Mere Social Presence in a Retail Context

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While the majority of consumer research that has studied social influences has focused on the impact of an interactive social presence, in this research we demonstrate that a noninteractive social presence (i.e., a mere presence) is also influential. We conduct two field experiments in a retail setting to show when and how a noninteractive social presence that differs in size and proximity impacts consumers’ emotions and self-presentation behaviors. In doing so, we refine Social Impact Theory by identifying boundary conditions under which the theory does not hold.

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ocial influence has been shown to play an important role in the consumption process (Bearden and Etzel 1982; Moschis 1976). The majority of research in this area has focused on how an interactive social influence, such as being greeted by salespeople or debating a group purchase, impacts a consumer (e.g., Childers and Rao 1992). However, social influence situations in consumption are not limited only to interactive situations but also include those that occur without an interaction. These noninteractive social situations include events where a social entity is physically present during consumption but is not involved nor attempts to engage the consumer in any way (e.g., other shoppers in a grocery aisle or a fellow audience member at the theater). To date, little research has studied the effects of this type of social influence on a consumer (for exceptions, see Dahl, Manchanda, and Argo 2001; Zhou and Soman 2003). The purpose of the present research is to broaden our understanding of the effects of a noninteractive social presence and investigate its relevance in a consumption situation.

The theoretical framework used in our research is Social Impact Theory (SIT; Latané 1981), which proposes that people are impacted by the real, implied, or imagined presence or action of a social presence (i.e., another person or group of people). This impact results from three “social forces”: number (i.e., social size—how many people are present), immediacy (i.e., proximity), and social source strength (i.e., importance; Latané 1981). Using a retail shopping environment as our context, we investigate the impact of two of these social forces, social size and proximity, on consumers’ emotions and self-presentation behaviors in two field experiments.

Our research contributes to the existing literature by refining SIT through the identification of boundary conditions under which the theory does not hold. In two studies we find that SIT does not predict the impact of a change in social size on consumers’ emotions and produces mixed results for impression management tendencies. At a more general level, we validate the importance of a noninteractive social influence in the consumption context and point to important opportunities for future research. Next, we review the principles of SIT and present the hypothesis for study 1.

SOCIAL IMPACT THEORY

As noted earlier, the impact of a social presence on a person results from “social forces” that include the size, immediacy, and strength of the social influence (Latané 1981). Social Impact Theory forwards three principles that define its functionality. First, the theory posits that the impact of a social presence’s social forces increases as a power function such that the greatest influence will arise when the social presence is large (vs. small), in close (vs. far) proximity, or is high (vs. low) in source strength (Latané and Wolf 1981). The second principle addresses the relationships between the social forces and suggests that the in-
fluence of a social presence is a multiplicative function of the forces with the greatest impact occurring when there are several people in close proximity and in high source strength. Finally, the third principle states that a social presence's influence is an inverse function of the number of targets, proximity, and source strength; the impact of the social forces will be divided between the targets. Our research focuses on the ideas inherent in the first two principles. We begin our conceptual development by outlining the importance of social size relative to consumers’ emotions and behaviors.

Social Size. Social Impact Theory proposes that as the size of a social presence increases, it should have an increasing impact on one’s emotions and behaviors. First, research on stage fright has supported this prediction by showing that an increase in audience size results in participants experiencing more negative emotions (Jackson and Latané 1981; Latané and Harkins 1976). Similarly, research on crowding has found that an increase in the number of people present decreases participants’ feelings of comfort and increases their negative affect (Griffitt and Veitch 1971; Langer and Saegert 1977). Thus, an increase in the size of a noninteractive social presence is expected to increase consumers’ negative emotions and decrease positive emotions.

Second, in general, people have a pervasive desire to be viewed in a positive light (Leary and Kowalski 1990), and to achieve this desire, they regularly engage in impression management behaviors. In fact, consumers will go to great lengths, such as lie (Sengupta, Dahl, and Gorn 2002) or purchase certain products (Leigh and Gabel 1992), to impress others. Thus, we expect that an increase in social size, which results in more people to impress (Schlenker and Weigold 1992), will translate into an increased tendency for consumers to manage their impressions.

**H1:** As the size of a noninteractive social presence increases, a consumer will be more likely to experience negative (and less positive) emotions and manage self-presentation behaviors.

**STUDY 1**

Method

In a retail shopping setting, a between-subjects experimental design tested the impact of social size (no one vs. one person vs. three people) on consumers’ emotions and behaviors. Eighty-seven undergraduate students (males = 48, females = 39) from a large North American university completed the study (cell sizes ranged from 28 to 30).

**Independent Variable.** Social size was manipulated, using trained confederates (one male/two females) who assumed the role of store shoppers. In the social presence conditions, a confederate (three confederates) was situated in the store aisle 2 ft. from a consumer battery display. The confederates were trained to avoid interacting with partic-

ipants and rehearsed their role to achieve consistency. In the no social presence condition, a confederate was not present. Social size manipulations were based on previous research (e.g., Jackson and Latané 1981).

**Procedure.** Participants were run individually and were told that the purpose of the research study was to evaluate the university bookstore for store management. As part of the evaluation, they were asked to visit the store, make a product purchase assigned by random draw, and then provide their impressions. Unknown to participants, the only product that could be drawn was a package of four AA batteries. The store’s battery display was located in a low-traffic aisle away from the view of the cashiers. The choice of store aisle and the fact that the study was run during off-peak hours helped minimize the likelihood that additional shoppers would be present in the aisle at the same time as the participants. Participants were given $5.00 to make the purchase and told that they could keep the product and any change remaining.

After participants returned from the store, they completed a questionnaire. To assess their emotions, they indicated how they felt while in the shopping aisle, using 11 seven-point scale items (not at all/very). Factor analysis indicated four underlying dimensions (two negative/two positive, 72% of variance explained), including annoyance (annoyed and frustrated; \( r = .55, p < .001 \)), self-consciousness (self-conscious and awkward; \( r = .88, p < .001 \)), happiness (good, happy, excited, and interested; \( \alpha = .81 \)), and confidence (confident, sure, and certain; \( \alpha = .81 \)). To assess the social size manipulation, they were asked how many, if any, other people were present in the aisle in which they found their assigned product. Participants also indicated their gender, age, and responded to a suspicion probe. Analysis of gender effects, cross-gender effects, age, and the suspicion probe were not significant in either of the studies and are not discussed further.

An observer situated two aisles away from the battery display assessed self-presentation behaviors. The first behavior measured the extent to which participants interacted with a battery-testing station located next to the display, using a three-point scale (1 = did not use, 2 = used somewhat, 3 = used extensively). A pretest showed that use of the station was “nerdy” and “uncool” in the presence of others. The second behavior recorded was brand selection. Pretesting established the prices of five brands to reflect differences in perceived quality, with higher prices denoting higher quality: Duracell/Energizer ($4.29), Rayovac/Panasonic ($3.99), and Chateau ($3.69).

**Results**

The social size manipulation was successful. Analysis of variance with the measure of the number of people in the aisle as the dependent variable and social size as the independent factor produced a significant main effect \( (F(2, 84) = 139.06, p < .001; \ M_{\text{one}} = 0.37, M_{\text{person}} = 1.45, M_{\text{people}} = 3.54) \). Post hoc tests showed significant dif-
ferences between the conditions no one versus one person ($t(57) = 5.91, p < .001$), one person versus three people ($t(55) = 10.31, p < .001$), and no one versus three people ($t(56) = 17.72, p < .001$).

ANOVA demonstrated that social size significantly influenced consumers’ emotions (annoyance: $F(2, 84) = 3.51, p < .05$; self-consciousness: $F(2, 84) = 5.06, p < .01$; happiness: $F(2, 84) = 4.02, p < .05$; and confidence: $F(2, 83) = 5.61, p < .01$; for means, see table 1). However, post hoc tests produced a surprising result. Specifically, the prediction that an increase in social size would result in an increase in negative (decrease in positive) emotions was not realized. Instead, a v-shaped (inverted v-shaped) pattern arose where the least negative (most positive) emotions were experienced in the one person condition (no one vs. one person, all vs. one person, all vs. three people, all). The no one and three people conditions did not differ significantly for any of the emotions (all $t's < 1$).

The results for the two behavioral measures also did not support hypothesis 1. ANOVA for the battery-testing station measure produced a main effect for social size ($F(2, 84) = 5.35, p < .01$). However, post hoc tests indicated that while participants used the station less (i.e., managed behaviors more) when a noninteractive social presence existed versus when they were by themselves (no one vs. one person, $t(57) = 2.81, p < .05$; no one vs. three people, $t(56) = 3.35, p < .01$), there was no significant difference identified between the social presence conditions ($t < 1$). Similarly, ordinal regression analysis demonstrated that social size impacted brand selection ($\beta = 1.36, Wald = 6.79, p < .01$). Further examination of the frequencies indicated that the lowest quality/priced brand was selected the most when there was no one present to impress, but when a social presence existed (one or three), there was no difference in brand selection.

**Discussion.** The results of study 1 showed that two distinct patterns arose when the size of a noninteractive social presence increased. Specifically, when social size increased from no one to one person, negative emotions decreased (positive emotions increased) and then inverted when the social size increased from one to three people. A possible explanation for this unexpected pattern is that people have a fundamental human motivation to belong (i.e., they desire interpersonal attachment; Baumeister and Leary 1995). Research has suggested that the social presence enhances self-presentation behaviors when a close noninteractive social presence exists, and the consumer experiences more negative (less positive) emotions. Findings for the behavioral measures also did not support SIT. Although participants did manage their impressions more when a noninteractive social presence existed, as compared to when they were by themselves, the actual size of the social presence (when it existed) did not appear to matter. Study 2 attempts to replicate the patterns of results in study 1 and introduces a second SIT force, proximity, whose impact on emotions and behaviors is explored in conjunction with social size.

**Proximity.** Immediacy is a social force that refers to the closeness or proximity of a social entity to a target. Recall SIT’s second principle, which states that a combination of two social forces produces a greater impact on a target than each of the forces independently. This principle has been supported in a number of investigations. Researchers have found that when a social presence in close proximity is large (vs. small) in size, a person’s personal space becomes invaded, creating stress and discomfort (Dabbs 1971; Sommer 1969), and the social presence will have enhanced visual accessibility to observe the behaviors of others (Kraut 1982). However, when the social presence is further away, personal space will not be invaded, and it will have less visual access, regardless of the social size. Thus, we expect that proximity will moderate the impact of social size on emotions and self-presentation behaviors.

**H2:** A consumer will experience more negative (less positive) emotions and will be more likely to manage self-presentation behaviors when a close noninteractive social presence increases in size, but when the social presence is further away, social size will no longer matter.

**STUDY 2**

**Method**

Study 2 employed a 2 (social size: one vs. three) × 2 (proximity: close vs. far) + 1 control between-subjects experimental design. One hundred and eighteen undergraduate students (males = 47, females = 71) successfully completed the assigned task (cell sizes ranged from 23 to 25).

Social size was manipulated as described in study 1. To
manipulate proximity, a confederate(s) was situated either 2 ft. (close) or 8 ft. (far) from the battery display. These distances were determined based on pretesting and earlier research (e.g., Sommer 1959).

The procedure followed study 1 with a few notable differences. First, a different campus retail outlet was used to increase experimental control. Second, a low-quality brand of battery was added to create an equal balance across brand quality levels. Third, two hidden cameras recorded the behaviors measured in study 1, and the footage was interpreted by two independent coders (reliability ranged from 97.1% to 100%). As in study 1, the same four dimensions of emotions were identified (62.3% of variance explained; annoyance: \( r = .55, p < .001 \); self-consciousness: \( r = .65, p < .001 \); happiness: \( \alpha = .73 \); and confidence: \( \alpha = .79 \)). To assess the proximity manipulation, participants rated the distance of other shoppers relative to themselves using three items (close/far, near/distant, next to me/away from me, \( \alpha = .95 \)). The manipulations for social size and proximity were successful (social size: \( F(1, 90) = 248.2, p < .001; M_{\text{person}} = 1.09, M_{\text{close}} = 3.11; \) proximity: \( F(1, 85) = 91.31, p < .001; M_{\text{close}} = 1.78, M_{\text{far}} = 4.02 \)).

Results

Consistent with hypothesis 2, ANOVA for emotions produced significant interactions between social size and proximity (annoyance: \( F(1, 90) = 10.47, p < .01; \) self-consciousness: \( F(1, 91) = 6.61, p < .05 \); happiness: \( F(1, 89) = 5.09, p < .05 \); confidence: \( F(1, 91) = 7.46, p < .01 \); for means, see Table 2). A main effect for social size was also identified for each emotion (\( p < .05 \)). Planned contrasts indicated that, as predicted, more negative (less positive) emotions were felt when a close noninteractive social presence was comprised of three people versus only one person (\( p < .01 \)), but when the social presence was further away, social size did not influence emotions differently (\( r < .1 \)). Including the control group in one-way ANOVAs using social size as the independent variable replicated the distinct pattern of emotions found earlier (\( p < .05 \)).

ANOVA for the battery testing station measure produced only a main effect for proximity (\( F(1, 83) = 5.76, p < .05 \), \( M_{\text{close}} = .08, M_{\text{far}} = .34 \)); the interaction effect did not reach significance (\( p > .20 \)). Participants interacted with the station more when the social presence was further away as opposed to close by. However, ordinal regression analysis using the battery brand as the dependent variable and the two social forces and their interaction term as predictor variables produced the predicted significant interaction effect (\( \beta = 1.81, \text{Wald} = 3.81, p = .05 \)) and a main effect for social size (\( \beta = 1.74, \text{Wald} = 6.23, p < .05 \)). Simple regression tests showed that when there were three people (vs. one person) in close proximity, participants were more likely to select the expensive/high-quality brands (\( \beta = 1.75, \text{Wald} = 6.21, p < .05 \)); however, when the social presence was further away, social size did not influence brand selection (\( \beta = 6.69E-02, \text{Wald} = .01, p > .20 \)). As in study 1, subsequent analysis demonstrated that participants in the control group interacted with the battery-testing station and selected the cheapest/lowest-quality brands more than those in the one or three close conditions (\( p < .05 \)).

Discussion. Study 2 demonstrates that the proximity of a noninteractive social presence moderates the impact of social size on emotions and brand selection. An increase in social size only influenced consumers when a noninteractive social presence was in close proximity. When it was further away, although the social presence was still noticed, the effects it produced did not change when social size increased. Further, this study established the robustness of the findings for emotions in study 1. Contradicting SIT, we again found that in experimental conditions with no one or a social presence comprised of three people, targets experienced more negative (less positive) emotions as compared to those in a one person social presence condition.

**GENERAL DISCUSSION**

Using a retail setting, the results of two field experiments show that the social size and proximity of a noninteractive

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<thead>
<tr>
<th>Table 2</th>
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<tr>
<td><strong>EXPERIMENT 2: MEANS AND STANDARD DEVIATIONS</strong></td>
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<td><strong>Control</strong></td>
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<td><strong>Annoyance</strong></td>
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<td><strong>Happiness</strong></td>
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<td><strong>Confidence</strong></td>
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<td><strong>Battery testing station</strong></td>
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<td><strong>Brand selection (%)</strong></td>
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<td>3 = 48</td>
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**Note.** Standard deviations are indicated in parentheses.

*1 = Energizer/Duracell, 2 = Rayovac/Panasonic, 3 = Chateau/Classics.
social presence influence consumers shopping for a product in a store aisle. A central contribution of our research is that the results for both emotions and behaviors identify boundary conditions under which SIT does not hold. First, SIT did not predict the unique inverted v-shaped (and v-shaped) pattern of results found for emotions. To qualify SIT, we propose that a need for interpersonal association may explain the decrease in negative (increase in positive) emotions that arose between the control and one person conditions. Indeed, at the extreme it appears that no one likes to be alone in a retail environment. However, when the social size increases beyond the comfort of one person, consumers’ emotional reactions turn negative, possibly due to the increasingly crowded environment. Second, the results for the impression management measures produced mixed support for SIT. While consumers’ tendencies to manage impressions appear to be attenuated when no one is present or the social presence is further away, seldom do differences arise between the one or three person conditions.

Our research presents an initial investigation concerning the impact of a noninteractive social presence in a consumption context. One limitation of this effort is that theoretical mechanisms that may explain why the mere presence of other shoppers influences consumers are not empirically tested. Future research should test the proposed explanations of interpersonal association and crowding identified. Another limitation of this work is that while field studies enhance external validity, they do so at the expense of internal validity. To illustrate, although efforts were taken to enhance experimental control, other shoppers could not be prevented from entering the aisle, and participants’ travel time between the experimenter and the stores likely varied. Although these types of effects should randomize across conditions, we recognize that laboratory settings would enhance internal validity. These limitations underscore the necessity for future research.

Future research could also focus on developing a more comprehensive theoretical explanation for our findings. To achieve this, research could integrate existing social theories such as Zajonc’s (1965) social facilitation model. Despite the fact that Zajonc’s model is defined in an evaluative social audience setting, it may provide insight into the role of arousal in our context. Following the model, participants may have become aroused when a social presence existed. As arousal is neutral, and situational factors establish its directionality and intensity, social size may have determined the emotional responses elicited. Similarly, a large social presence may have heightened arousal, distracting or impairing one’s ability to further manage impressions as compared to when one person was present. If and how arousal affects emotions and behaviors as an outcome of different social sizes is an important question. Research that directly measures arousal, using scales such as PAD (Mehrabian and Russell 1974), is warranted.

Interestingly, no differences arose in the emotions experienced between the no one and three person conditions.

Future research should address this null finding by testing larger social sizes than those studied here. Research could also explore SIT’s remaining social force, source strength. Finally, little attention has been devoted to understanding the impact of partially interactive social influences (for an exception, see Stayman and Deshpande 1989); thus, determining the impact of various degrees of social interactions on consumers is needed.

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REFERENCES


for Marketing Strategy,” *Journal of Services Marketing*, 6 (Summer), 5–16.


