



Feeling excluded? Join the crowd: How social exclusion affects approach behavior toward consumer-dense retail environments[☆]

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ABSTRACT

Due to its essentiality to survival, humans evolved a psychological system that monitors social affiliation. When the system detects a threat, such as social exclusion, perceptions and responses are biased toward regaining affiliation. Retail environments that are crowded with other consumers, often viewed as an obstacle to consumer approach behavior, may instead be perceived positively by socially excluded consumers. Three studies test this premise and results suggest that socially excluded consumers are more likely to choose a crowded retail space, and exhibit higher intentions to browse and spend more money at a crowded retailer. Consistent with an evolutionary social cognitive account, socially excluded consumers exhibit a heightened affiliation motivation that increases crowding perceptions, in turn enhancing intentions to spend time and money. Mood and hedonic shopping orientation are ruled out as alternative explanations.

1. Introduction

Social affiliation is considered one of the most important human evolutionary adaptations (Neuberg & Schaller, 2014). Interdependence with others is a vital part of human evolution (Buss, 1990), as it improved the odds of survival through shared resources, protection, and reproductive benefits (Baumeister & Leary, 1995; Buss, 1990; Neuberg & Schaller, 2014). The need for belonging is so fundamental to well-being (Baumeister & Leary, 1995) that humans have evolved a psychological system to monitor the level of social affiliation (Leary, Tambor, Terdal, & Downs, 1995). When a threat to social affiliation, such as social exclusion, is detected, the monitoring system guides information processing toward achieving the goal of affiliation (Pickett, Gardner, & Knowles, 2004), functionally biasing perceptions of the environment to facilitate goal fulfillment (Cole, Balcetis, & Dunning, 2013). That is, perceiver goals, such as affiliation, influence how people interpret and respond to environmental stimuli (Neuberg & Schaller, 2014).

This response system may be the key to understanding how marketers can influence positive responses toward crowded retail environments. Much marketing research on crowded shopping environments finds that people respond negatively to crowding (e.g., Eroglu & Harrell, 1986; Eroglu & Machleit, 1990; Hui & Bateson, 1991; Machleit, Eroglu, & Mantel, 2000; Machleit, Kellaris, & Eroglu, 1994; Noone &

Mattila, 2009). Research on retail density and crowding posits that consumers' perceptions of whether or not they will be able to achieve their goals in a crowded retail environment that is highly dense with other shoppers affects consumers' cognitive, affective, and behavioral responses (Eroglu & Harrell, 1986). Thus, the human desire to avoid isolation may make crowding more desirable as it facilitates goal attainment. Specifically, the present research proposes that, due to an enhanced proclivity to interpret crowded shopping environments as an opportunity to achieve the goal of social affiliation, social exclusion can influence people to perceive crowded retail environments positively, resulting in beneficial responses toward the retailer. After reviewing and integrating the literatures on the evolutionary nature of social affiliation and retail crowding, a series of three studies are presented. Results support that social exclusion activates an affiliation motivation that influences how consumers perceive consumer-dense retail environments, and these perceptions positively influence consumers' approach behavior toward the retailer.

This research makes three important contributions to the literature. First, it considers retail crowding as a positive phenomenon, and identifies a factor that enhances consumers' approach behavior toward crowded retailers. Positive perspectives on retail crowding are infrequently explored in the literature, and have yet to be examined as an outcome of social exclusion. Second, this research demonstrates that social exclusion increases consumers' approach behavior due to a desire

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to gain affiliation, and shows that socially excluded consumers actually perceive retail environments as more crowded than non-excluded consumers. These findings illustrate one way the affiliation goal biases environmental perceptions and response in the retail crowding context. Third, this research integrates theory on evolutionary social cognition and research on retail crowding to derive these predictions, contributing to both of these research streams by supporting the applicability of evolutionary social cognition to modern social consumption settings like retail shopping.

2. The evolutionary nature of social affiliation

Evolutionary social cognitive theory asserts that the human brain, like other aspects of the body, has evolved in response to the circumstances of social existence, resulting in “adaptation-based, functional social-cognitive processes aimed at managing challenges” (Neuberg & Schaller, 2014, p. 3). The threat of social exclusion is one such challenge (Neuberg & Schaller, 2014). Social affiliation is so essential to survival and wellbeing that social exclusion is perceived to be as threatening as physical harm (Eisenberger, 2012; MacDonald & Leary, 2005). Indeed, evidence supports that the same neural circuitry that processes physical pain has been co-opted to process social pain, such that the neurobiological experiences of social pain and physical pain overlap (Eisenberger, 2012; Eisenberger & Lieberman, 2004; MacDonald & Leary, 2005).

Humans feel social pain in response to the mere threat or possibility of social distance (Eisenberger & Lieberman, 2004). Evolutionary social cognitive theory proposes that the nervous system is characterized by “stimulus-response mechanisms, in which specific sets of psychological inputs trigger specific kinds of psychological outputs... (in the form of) emotional, cognitive, and behavioral responses,” (Neuberg & Schaller, 2014, p. 4). Stimulus cues activate goals that influence perception, interpretation, and responses, and when the stimulus cue is a threat, responses are geared toward reducing the threat (Neuberg & Schaller, 2014). Thus, when the psychological social monitoring system detects a threat to social affiliation, such as social exclusion, the goal of regaining affiliation guides information processing and response (Neuberg & Schaller, 2014; Pitts, Wilson, & Hugenberg, 2014).

Threats to social affiliation motivate affiliation goals (Lakin, Chartrand, & Arkin, 2008; Maner, DeWall, Baumeister, & Schaller, 2007; Mead, Baumeister, Stillman, Rawn, & Vohs, 2011), causing increased sensitivity to signals of inclusion (DeWall, Maner, & Rouby, 2009; Pickett et al., 2004). Research demonstrates that social exclusion alters people's perceptions of others. For example, socially excluded people estimate others as significantly closer in distance (Pitts et al., 2014), and estimate having significantly more friends on Facebook (Mourey, Olson, & Yoon, 2017). Esmark and Noble (2018) find that encroaching on a consumer's personal space can decrease feelings of rejection. Socially excluded people are more likely to exhibit affiliative behavior such as seeking to forge new social bonds (Maner et al., 2007), altering their self-concepts and behavior to become more similar to others (Lakin et al., 2008; Richman, Slotter, Gardner, & DeWall, 2015), and ingratiating themselves to others through helpful behavior (Romero-Canyas et al., 2010).

Socially excluded people also engage in strategic consumption, spending money on activities and gifts in pursuit of affiliation (Romero-Canyas et al., 2010). Socially excluded consumers tailor their spending toward the preferences of their membership groups, even if it means choosing unappealing food items or engaging in illegal activity (Mead et al., 2011). Socially excluded people prefer anthropomorphized brands (Chen, Wan, & Levy, 2017; Mourey et al., 2017), and pursue riskier but potentially more lucrative financial decisions due to perceiving a need for more resources to secure the benefits a social system would provide (Duclos, Wan, & Jiang, 2013). As motivational goals bias perceptions of the environment (Dunning & Balceris, 2013) so as to facilitate goal fulfillment (Cole et al., 2013; Pitts et al., 2014), it is

reasonable to expect that the affiliation goal can also influence the way socially excluded people interpret and respond to retail environments that are dense with other consumers.

3. Retail density and crowding

Density in a retail environment can be conceptualized in terms of *objective density*, the actual number of people and objects in an area, *perceived density*, an individual's subjective estimation and perception of objective density, or *affective density*, referring to an individual's evaluation of whether perceived density detrimentally affects the individual's ability to achieve his or her goals (Eroglu & Harrell, 1986). Density can also be decomposed into *human density*, which refers to the number of people in an area, and *spatial density*, which refers to the number of objects and fixtures, as well as their configuration, in an area (Eroglu & Machleit, 1990; Machleit et al., 1994; Machleit et al., 2000). Specifically, *consumer density* represents the physical condition of the number of consumers present in a retail setting (Hui & Bateson, 1991). The present research considers *perceived consumer density*, which captures the individual perceptions of the number of people in a retail space, in examining consumers' interpretation of and responses to crowding.

Density is an antecedent to *crowding*, traditionally defined as a psychological state of stress that results when the amount of space an individual needs exceeds the space available (Stokols, 1972); that is, the traditional conceptualization of crowding occurs when the individual's affective evaluation of perceived density is negative and the density is deemed dysfunctional and thus prohibitive of goal achievement (Eroglu & Machleit, 1990). Because the traditional definition of crowding is negative, it is not surprising that much research into density-induced retail crowding reports negative outcomes.

Perceived density increases negative retail crowding perceptions such as feeling closed, confined, that there are too many shoppers, and that movement is restricted (Eroglu & Machleit, 1990), as well as reports that the environment feels cramped and stuffy (Hui & Bateson, 1991). Crowding has been shown to cause consumers to feel undesirable emotions, such as lower pleasure (Hui & Bateson, 1991; Machleit et al., 2000) and stronger anger, disgust, contempt, sadness (Machleit et al., 2000), and anxiety (Huang, Huang, & Wyer, 2018), and to experience lower satisfaction (Machleit et al., 1994). Crowding also increases risk sensitivity, and results in a preference for safety-oriented objects (Maeng, Tanner, & Soman, 2013). Retail environments perceived as dysfunctionally crowded influence consumers to adapt their shopping behavior (Harrell, Hutt, & Anderson, 1980) by deviating from their shopping plans, spending less time in store (Eroglu & Harrell, 1986), and spending less money (Noone & Mattila, 2009). Retail crowding's negative outcomes may be amplified for task-oriented shoppers, time-pressured shoppers, or those shopping for high risk products (Eroglu & Harrell, 1986; Pan & Siemens, 2011).

However, some studies report factors that can attenuate the negative effects of perceived crowding. Maeng et al. (2013) find that in-group crowds reduce the effect of crowding on the preference for safety-oriented products. Consumers' expectations toward and tolerance for crowding can temper the detrimental effect of crowding on satisfaction (Eroglu, Machleit, & Barr, 2005; Machleit et al., 2000; Pons, Giroix, Mourali, & Zins, 2016). Hui and Bateson (1991) find that consumers who feel in control of the situation perceive consumer-dense retail environments as less dysfunctionally crowded and experience enhanced pleasurable emotions, resulting in stronger desires to stay and affiliate. Retail consumer density may also serve as a heuristic cue for the consumer demand, attractiveness, and desirability of a retail store (Pan & Siemens, 2011), evoking positive emotions of pleasure, increasing satisfaction and, in turn, time spent in-store and impulse purchases in a hypermarket environment (Li, Kim, & Lee, 2009).

Some evidence supports that consumer goals, and the perceived ability to achieve them, affect responses to retail environments that are

Table 1

Summary of research on retail crowding.

The research explores factors that...	Influence negative perceptions of crowding	Are negative outcomes of crowding	Attenuate the negative outcomes of crowding	Influence positive perceptions of crowding	Are positive outcomes of crowding	Attenuate the positive outcomes of crowding
Baker & Wakefield, 2012	✓	✓		✓		
Eroglu & Harrell, 1986		✓				
Eroglu & Machleit, 1990	✓	✓				
Eroglu et al., 2005		✓	✓		✓	
Huang et al., 2018					✓	
Hui & Bateson, 1991	✓	✓			✓	
Li et al., 2009					✓	
Machleit et al., 2000		✓	✓			
Maeng et al., 2013		✓	✓			
Machleit et al., 1994		✓	✓			
Noone & Mattila, 2009		✓	✓			
Pan & Siemens, 2011		✓	✓			
Pons et al., 2016		✓	✓			
This research				✓	✓	

consumer-dense. Crowding's reductive effect on satisfaction is mitigated when the consumption goal is hedonic rather than utilitarian (Noone & Mattila, 2009; Pons et al., 2016). Similarly, Baker and Wakefield (2012) find that "social shoppers, who tend to have a higher need for intimacy, perceive density positively, and feel excited" report increased retail patronage intentions (p. 800). Supporting the premise that social exclusion may positively influence consumers' perceptions of crowding, Eroglu and Harrell (1986) state, but do not test the conjecture, that consumers may seek consumer-dense retail environments when interpersonal intimacy-related motives are salient. See Table 1 for a summary of the current literature.

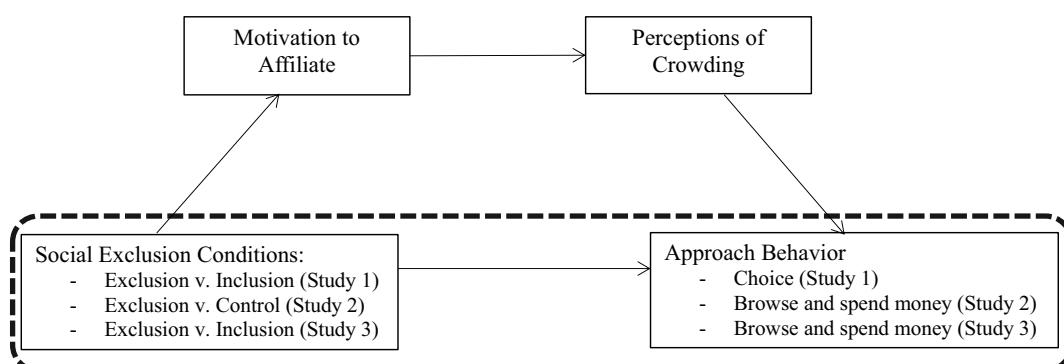
Taken together, retail density and crowding research asserts that differences in consumers' goals, and consumers' inferences of whether or not they will be able to achieve them in a consumer-dense retail environment, affect consumers' response toward the retailer (in the context of the present research, approach behavior). Spangenberg, Sprott, Grohmann, and Tracy (2006) define approach behavior as "positive responses toward the environment or items within the environment, such as intentions to remain in, or revisit a store, or actually spending money in a store" (p. 1282). Specifically, consumers are likely to evaluate perceived consumer density in retail settings positively when the density helps them achieve their goals (Eroglu & Harrell, 1986), enhancing approach behavior toward the retailer. This assertion is consistent with evolutionary social cognitive theory, which posits that, under social exclusion, the activated affiliation goal influences the interpretation and perception of the environment, in turn, guiding responses toward achieving affiliation (Neuberg & Schaller, 2014). Thus, consumers experiencing the aversive state of social exclusion should prefer the presence of others, enhancing approach behavior toward

crowded retail environments; specifically, increasing consumers' choice of crowded retailers, as well as their intentions to spend time and money.

H1. Socially excluded (included or non-excluded) consumers will exhibit stronger (weaker) approach behavior toward crowded retail environments.

The relationship between social exclusion and approach behavior should be sequentially mediated by consumers' motivation to affiliate and their perceptions of crowding. Social exclusion enhances consumers' motivation to affiliate (Lakin et al., 2008; Maner et al., 2007; Mead et al., 2011), and the activated affiliation goal should functionally bias perceptions of the environment toward goal fulfillment (Cole et al., 2013; Dunning & Balcetis, 2013; Pitts et al., 2014). As highly consumer-dense retail environments are an opportunity for consumers to achieve their activated affiliation goal, the affiliation motivation activated by social exclusion should influence consumers to perceive higher consumer density in a retail environment. Indeed, past research demonstrates that the desire to affiliate increases sensitivity to signals of inclusion (DeWall et al., 2009; Pickett et al., 2004) and alters consumers' perceptions of others (Mourey et al., 2017; Pitts et al., 2014). Increases in perceived consumer density should be perceived as affectively positive, as the retail-dense environment helps consumers achieve their goals (Eroglu & Harrell, 1986), enhancing approach behavior toward the retailer. The hypothesized relationships are summarized in Fig. 1.

H2. The effect of social exclusion on approach behavior toward crowded retail environments will be sequentially mediated by motivation to affiliate and perceptions of crowding.

**Fig. 1.** Conceptual model.

Dotted line indicates relationships tested in Studies 1–3. Entire model tested in Study 3.

4. Study 1

According to H1, social exclusion should influence people to exhibit stronger approach behavior toward crowded retail environments. In an initial test of this hypothesis, Study 1 operationalizes approach behavior as choice.

4.1. Pretest: social exclusion manipulation

Previous research (Mead et al., 2011) has employed a writing task under the guise of a memory assessment in order to manipulate social exclusion. To confirm the effectiveness of this manipulation, participants ($n = 41$; 49% male, average age 35), recruited from an online marketplace for monetary compensation, were randomly assigned to either a social exclusion or inclusion condition. In the social exclusion condition, participants were prompted to write in detail about a time that they felt socially excluded, while in the social inclusion condition, participants were prompted to write in detail about a time that they felt socially included. In both conditions, participants were provided examples of behavior that may result in either feelings of social exclusion (e.g. not being picked for a team, having someone reject your friendship, etc.) or social inclusion (e.g. being picked for team, having someone accept your friendship, etc.). In both conditions, participants were told they must write about a real situation that happened directly to them in their life. All participants were required to write for at least 2 min, imposed by a timer that prevented participants from advancing. Based on items employed by Twenge, Catanese, and Baumeister (2003) and Chen et al. (2017), participants then rated the extent to which they felt “rejected” (reverse coded) and “included” on a one (strongly disagree) to seven (strongly agree) scale ($r = 0.92$) with focal items masked among filler items.

A one-way ANOVA shows that participants in the exclusion condition felt significantly less included ($M = 2.67$, $SD = 1.55$) than participants in the inclusion condition ($M = 5.37$, $SD = 1.44$; $F(1,39) = 33.22$, $p < .01$). Further, one-sample t -tests demonstrate that participants in the exclusion condition rated their feelings of inclusion significantly below the midpoint of the scale ($t(17) = -3.64$, $p < .01$), while those in the inclusion condition provided ratings significantly above the midpoint of the scale ($t(23) = 4.56$, $p < .01$). Pretest results support the effectiveness of the writing task (Mead et al., 2011) in manipulating social exclusion.

4.2. Pretest: stimuli selection

A second pretest was conducted to select paired images of crowded and non-crowded retail environments that were liked equally. Twenty-one students (38% male, average age 21) from a large, midwestern university were recruited in exchange for extra course credit. Participants viewed eighteen different images in randomized order, and rated each image on two seven-point scales. One scale measured how much participants liked the image (1-strongly dislike, 7-strongly like), and the other measured perceived crowding (1-not at all crowded, 7-very crowded). Four sets of pairs were selected, with the images in each pair comparable in terms of setting depicted and liking (all p -values $> .10$), but significantly differing on perceptions of crowding (all p -values $< .05$).

4.3. Procedure

For Study 1, 55 participants (33% male, average age 22) were recruited from a large, east coast university in exchange for extra course credit. Participants were emailed a link to an online survey administered in Qualtrics. After opening the survey and providing consent, participants were told, as a cover story, that they were to complete two separate, unrelated tasks. Consistent with previous research (Mead et al., 2011), participants were told the first task was an assessment of

memory and were randomly assigned to either a social exclusion or inclusion condition, manipulated following the steps described in the first pretest.

For the second task, participants chose the image in each pair that they preferred (please see the Appendix for all stimulus images employed in this research). Images were presented side by side with presentation location (left or right) randomized, and participants chose the preferred image in each pair by clicking on it. Non-crowded images were coded as 0 and crowded images were coded as 1. Participants' choices for each pair were summed to create a scale ranging from 0 (only non-crowded images were chosen) to 4 (only crowded images were chosen).

4.4. Results

A one-way ANOVA shows that socially excluded participants chose significantly more crowded images ($M = 2.25$, $SD = 1.04$) than socially included participants ($M = 1.52$, $SD = 1.09$; $F(1,53) = 6.50$, $p < .05$). Study 1 provides support for H1, demonstrating a positive influence of social exclusion on approach behavior (i.e., choice) toward crowded retail environments.

5. Study 2

Study 2 demonstrates the robustness and generalizability of the result of Study 1 by using 1) a different construct to measure approach behavior, 2) a non-student sample, and 3) a no exclusion condition as opposed to an inclusion condition. First, approach behavior was operationalized through behavioral intentions (continuous) as opposed to choice (dichotomous). Second, Study 2 uses a non-student sample for data collection. Finally, a no exclusion condition, as opposed to an inclusion condition, was used in Study 2. This manipulation is consistent with the social exclusion literature (e.g., Mead et al., 2011; Mourey et al., 2017), and is adopted to demonstrate that differences in effects observed between social exclusion and inclusion conditions hold when participants do not recall a past, affiliation-boosting experience.

Study 2 also rules out mood and hedonic shopping orientation as alternative explanations. Past research (Duclos et al., 2013; Mourey et al., 2017; Su, Jiang, Chen, & DeWall, 2016) supports that the social exclusion manipulation does not impact mood; nonetheless, to ensure that mood is not influencing the observed effects, mood was measured and examined as an alternative explanation. Further, past research shows consumers are motivated to shop for a variety of reasons (Arnold & Reynolds, 2003), with some consumers deriving more value in the form of pleasure from shopping, known as a hedonic shopping orientation (Babin & Attaway, 2000; Babin, Darden, & Griffin, 1994). Extant literature proposes that hedonic shoppers hold more positive perceptions of retail crowding which, in turn, positively affects approach behavior (Baker & Wakefield, 2012; Eroglu & Harrell, 1986). Essentially, this past research suggests that the positive effects of social exclusion on approach behavior toward a crowded retail environment observed in Study 1 could potentially be attributed to differences in hedonic shopping orientation. To demonstrate that increased approach behavior is not due to variation in shopping orientation, hedonic shopping orientation was measured in Study 2.

5.1. Pretest: stimulus selection

To ensure that the image for Study 2 was perceived as crowded, 39 participants (44% male, average age 37) from an online marketplace were recruited to participate in a pretest for monetary compensation. Participants viewed the image of the retailer and then, using an item from Machleit et al. (2000), were asked to rate the extent to which “The mall seems very busy” on a one (strongly disagree) to seven (strongly agree) scale. A one-sample t -test shows that participants perceived the image as crowded, since the mean ($M = 5.44$, $SD = 1.50$) was

significantly above the midpoint of the scale ($t(38) = 5.98, p < .01$).

5.2. Procedure

Eighty-one individuals were recruited and compensated through an online marketplace to participate in a Qualtrics-administered survey. As in Study 1, participants were told that they were completing two separate, unrelated tasks. In the memory task, participants were randomly assigned to either a social exclusion condition or a no exclusion (control) condition. While the exclusion manipulation was the same as Study 1, the no exclusion condition asked participants to write in detail about their previous day. Consistent with procedures from [Mooney et al. \(2017\)](#), directly following this manipulation, participants were asked to rate their mood on a -5 (very negative) to $+5$ (very positive) scale. In the second task, participants were introduced to the ostensibly unrelated task of assessing a retailer. As with past research ([Baker & Wakefield, 2012](#)), participants viewed an image of the inside of a shopping mall and were told to imagine they were shopping at that location.

Consumers' approach behavior ($r = 0.58$) was assessed through intentions to browse and spend money in the retail environment. Specifically, participants indicated their level of agreement on a one (strongly disagree) to seven (strongly agree) scale to the statements "I would spend time browsing the mall" and "I would probably spend more money than I initially intended to spend at this mall." Participants also completed a hedonic shopping orientation scale ($\alpha = 0.94$) adapted from [Jones, Reynolds, and Arnold \(2006\)](#): "Shopping is a joy," "I frequently shop not because I have to, but because I want to," "Time spent shopping is truly enjoyable," "I enjoy shopping for its own sake, not just for the items I may have to purchase," "I like the excitement of the hunt when shopping," and "While shopping, I feel a sense of adventure," measured on a one to seven scale with endpoints strongly disagree (1) and strongly agree (7). Answers to an attention check question and demographic information were collected. One participant failed to follow directions while another failed the attention check and, thus, were screened from analysis, resulting in a final sample of 79 participants (56% male, average age 37).

5.3. Results

5.3.1. Intentions to browse

A one-way ANOVA shows that the social exclusion condition had a significant effect on approach behavior ($F(1,77) = 3.02, p < .05$). Socially excluded participants indicated stronger approach behavior toward the retailer ($M = 4.49, SD = 1.39$) than non-excluded participants ($M = 3.88, SD = 1.68$). These results strengthen support for [H1](#), demonstrating a positive influence of social exclusion on approach behavior (i.e., intentions to browse and spend money) toward crowded retail environments.

5.3.2. Alternative explanations

To account for the effect of mood or hedonic shopping orientation, the analysis was conducted with mood and hedonic shopping orientation as covariates. Including these variables as covariates did not change any of the observed results or preceding conclusions, as the relationship between social exclusion and approach behavior remained significant ($p < .05$).

5.4. Discussion

The results from Study 2 support [H1](#). Study 2 demonstrates that socially excluded consumers express stronger intentions to exhibit approach behavior toward a retail environment crowded with other shoppers, regardless of hedonic shopping orientation or mood.

6. Study 3

Study 3 was conducted to test the proposed conceptual model in its entirety, corresponding to [H2](#).

6.1. Pretest: perceived crowding measure

To date, perceived crowding has often been examined as a negatively-valenced construct. However, the evolutionary social cognitive perspective offered in the present research suggests that social exclusion should result in consumers perceiving crowds positively, as highly consumer-dense retail environments are an opportunity for socially excluded consumers to achieve their activated affiliation goal. Thus, to demonstrate that social exclusion results in more positive perceptions of crowding and to aid in the development of a perceived crowding measure that is not affectively negative, a pretest was conducted.

Eighty-two participants were recruited from business courses at a large, east coast university in exchange for extra course credit. Participants were emailed the link to the survey, administered in Qualtrics. Consenting participants were informed that they were taking part in two separate tasks, including the same social exclusion/inclusion manipulation as Study 1 and the same retailer assessment as Study 2, but using the retail image for Study 3. An affectively neutral measure of perceived crowding ($r = 0.79$) was captured using two items from [Machleit et al. \(2000\)](#): "This mall seems very busy" and "There isn't much traffic in this mall (reverse coded)." A measure of affectively negative perceived crowding ($\alpha = 0.77$) was adapted from [Baker and Wakefield \(2012\)](#) using items "stuffy," "cramped," "restricted," and "confined." A measure of affectively positive perceived crowding ($\alpha = 0.76$) was captured using the items "sociable," "active," "exciting," and "popular." All items were measured on a one to seven scale with endpoints strongly disagree (1) and strongly agree (7). An attention check was incorporated and demographic information was collected. Participants who failed to follow directions (i.e. complete the dependent variables or correctly respond to the attention check) were screened from the analysis resulting in a final sample of 71 participants (51% male, average age 21).

A one-way ANOVA demonstrates that participants who felt socially excluded reported significantly higher neutral perceived crowding ($M = 4.59, SD = 1.22$) than participants who felt socially included ($M = 3.97, SD = 1.32; F(1,69) = 4.14, p < .05$). Two separate ANOVAs examining negative and positive perceived crowding revealed no significant differences in negative perceived crowding ($F(1,69) = 1.77, p = .19$), but a significant effect of social exclusion on positive perceptions of crowding ($F(1,69) = 5.32, p < .05$). Participants who felt socially excluded reported significantly stronger positive perceived crowding ($M = 5.19, SD = 0.67$) than those who felt socially included ($M = 4.68, SD = 1.11$). These results suggest that the traditional affectively negative measure of crowding does not accurately capture differences in perceptions of crowding due to social exclusion. As anticipated, socially excluded individuals perceive retail environments as more crowded, but these perceptions of crowding are more affectively positive.

6.2. Procedure

One hundred fifty individuals were recruited from an online marketplace for monetary compensation, and were told they would participate in two separate, unrelated tasks. Procedures (task 1) mirrored the social exclusion or inclusion manipulations in Study 1 and (task 2) employed the same procedure from Study 2 except a different retail image was used (the Study 3 image). Using a different retail image in Study 3 further demonstrates generalizability by showing the results obtained in Study 2 are not an artifact of the specific image used. Consumers' approach behavior ($r = 0.65$) was assessed through intentions to browse and spend money in the retail environment by

indicating their level of agreement, on a one (strongly disagree) to seven (strongly agree) scale, with the same statements used in Study 2: "I would spend time browsing the mall" and "I would probably spend more money than I initially intended to spend at this mall." Perceived crowding was assessed in a manner similar to the pretest, combining the affectively neutral and positive measures. Participants rated the extent to which the mall seemed "active," "exciting," "popular," "sociable," "busy," and "crowded" ($\alpha = 0.84$) on a one to seven scale with endpoints strongly disagree (1) and strongly agree (7). Participants reported their motivation to affiliate by responding to the item, "I would feel friendly to strangers shopping at this mall," on a one to seven scale with endpoints strongly disagree (1) and strongly agree (7). As in previous studies, participants who failed the attention check were screened from the analysis. Moreover, 22 participants who indicated that they could not imagine themselves shopping at the mall were eliminated, resulting in a sample of 119 (37% male, average age 34).

6.3. Results

6.3.1. Approach behavior

A one-way ANOVA was conducted to examine the effect of social exclusion condition (coded: 0 = inclusion, 1 = exclusion) on approach behavior. A one-way ANOVA revealed a significant effect of social exclusion condition on approach behavior ($F(1,118) = 6.49, p < .05$). Socially excluded participants expressed stronger approach behavior toward the retailer ($M = 5.28, SD = 1.12$) than socially included participants ($M = 4.74, SD = 1.19$).

6.3.2. Mediation model

To determine if the relationship between social exclusion condition and approach behavior is sequentially mediated by motivation to affiliate and perceived crowding, data were analyzed using Process model 6 (Hayes, 2013) with 5000 bootstrap resamples. The indirect effects support the proposed sequential mediation model ($b = 0.05, 95\% \text{ CI} = [0.0070, 0.1164]$), see Table 2. Social exclusion had a significant, positive effect on motivation to affiliate ($b = 0.64, t = 2.58, p < .05$). Motivation to affiliate positively influenced perceived crowding in the retail space ($b = 0.20, t = 2.88, p < .01$). Perceived crowding significantly increased approach behavior ($b = 0.37, t = 3.83, p < .01$). To further confirm the directionality of the effects, the sequential mediation model was examined in reverse (the order of the mediators are switched), and, as such, the model no longer holds ($b = -0.01, 95\% \text{ CI} = [-0.0092, 0.0480]$).

6.4. Discussion

Study 3 demonstrates that socially excluded consumers exhibit a motivation to affiliate in the retail environment and as a result, perceive the retail environment as more crowded, thereby increasing intentions to engage in approach behavior. These findings are consistent with research that suggests social exclusion activates the motivation to affiliate (e.g., Park & Maner, 2009) and forge new social bonds (Maner

et al., 2007). The motivation to affiliate influenced perceived crowding in the retail environment so as to facilitate goal fulfillment (i.e., positive perceptions of crowding), in accord with evolutionary social cognitive theory. Further, perceived crowding increased intentions to spend time and money in the retail environment, which aligns with the proposition that interpersonal intimacy-related motives (Eroglu & Harrell, 1986) may enhance perceptions of, and approach behavior toward, consumer-dense, crowded retail environments.

7. General discussion

To date, the majority of research finds that people respond negatively to crowding (e.g., Eroglu & Harrell, 1986; Eroglu & Machleit, 1990; Hui & Bateson, 1991; Machleit et al., 1994; Machleit et al., 2000; Noone & Mattila, 2009). It is important to note, though, that crowding has been shown to positively influence consumers' behavior (e.g., Eroglu et al., 2005). Eroglu and Harrell (1986) propose, but do not test the assumption that, under certain circumstances, the human desire to avoid isolation may make crowding more desirable. By integrating an evolutionary psychology perspective, our research examines how social exclusion influences positive perceptions of consumer-dense retail environments, enhancing approach behavior.

Su et al. (2016) contend that understanding the influence of rejection on consumption is an important area of consumer behavior research, an argument bolstered by the assertion that social exclusion is a common experience (Duclos et al., 2013; Wesselmann, Wirth, & Bernstein, 2017). The present research contributes to such literature, showing that beyond making specific purchases (Mead et al., 2011), social exclusion motivates people to shop among others. This contribution is important, as much social exclusion research focuses on brand-specific behavior, rather than the influence of exclusion on shopping behavior in general.

This research also contributes to the larger body of literature examining self-threats from an evolutionary psychology perspective. Past research shows that self-threats can trigger consumers' innate social and psychological needs, shifting the way consumers behave. For example, among men, the threat of same-sex competition leads to increased status-signaling consumption (Otterbring, Ringler, Sirianni, & Gustafsson, 2018) and decreased intentions to save and increased willingness to borrow money (Griskevicius et al., 2012). Similarly, women choose sexier clothing (Durante, Griskevicius, Hill, Perilloux, & Li, 2010) and are more likely to engage in conspicuous consumption (Wang & Griskevicius, 2013) when the threat of same-sex competition is salient. The studies presented here also support that a self-threat, in the form of social exclusion, can trigger a social psychological need that alters consumer behavior; specifically, social exclusion activates consumers' motivation to affiliate, thus changing and enhancing how consumers' perceive consumer-dense retail settings, and increasing approach behavior toward retail environments crowded with other shoppers.

Managerially, retail crowding has often been viewed negatively, as the aforementioned research shows that crowding results in avoidance

Table 2
Sequential mediation results.

	Consequent								
	M ₁ (Motivation to Affiliate)			M ₂ (Perceived Crowding)			Y (Approach Behavior)		
Antecedent	Coeff.	SE	p	Coeff.	SE	p	Coeff.	SE	p
X (Social Exclusion Condition: Exclusion = 1)	0.642	0.248	0.011	0.081	0.189	0.669	0.316	0.199	0.116
M ₁ (Motivation to Affiliate)				0.197	0.069	0.005	0.183	0.075	0.016
M ₂ (Perceived Crowding)							0.374	0.098	0.000
Constant	4.358	0.164	0.000	3.304	0.323	0.000	2.384	0.468	0.000
	$R^2 = 0.054$			$R^2 = 0.076$			$R^2 = 0.229$		
	$F(1,117) = 6.674, p = .011$			$F(2,116) = 4.781, p = .010$			$F(3,115) = 11.431, p = .000$		

behavior. However, retailers may benefit from encouraging crowding by aligning their marketing tactics with social exclusion and reaffiliation opportunities. For example, certain times of the year are more likely to result in social exclusion. Valentine's Day frequently garners attention for the focus it places on those in romantic relationships, leaving people without a significant other potentially feeling isolated. Retail environments that appear crowded could be more enticing for these individuals. While most retailers appeal only to couples with their Valentine's Day marketing, Walmart's latest strategy encouraged single women to celebrate Galentine's Day (February 13th) and promoted Valentine's Day shopping as a way to celebrate any loved one, not just a romantic partner (Thau, 2018). In a similar strategy, Victoria's Secret renamed Valentine's Day "Me Day" (Thau, 2018). Retailers might further enhance this type of strategy by offering promotional deals that encourage crowding during specific timeframes, or by promoting store events as an opportunity to mingle. The present results suggest that such strategies should prove successful for retailers.

From an evolutionary psychology perspective, people may perceive

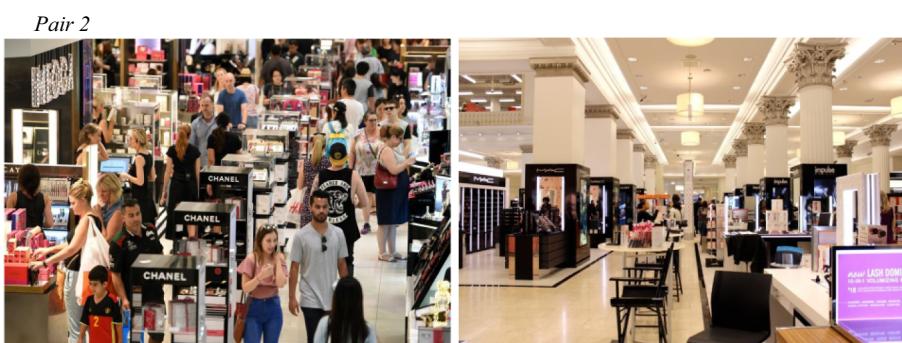
Appendix A. Stimulus images

Study 1

Pair 1



Pair 2



Pair 3



crowds as potential sources of danger; for example, increasing the perceived risk of exposure to communicable parasites (Kurzban & Leary, 2001). Future research should explore how making such risks salient moderates the effects found in this research. Further, future research should explore if certain retail environments are more likely to make such risks salient. For example, are socially excluded consumers equally likely to demonstrate approach behavior toward a pharmacy as they are to a shopping mall? Similarly, socially excluded consumers may not demonstrate enhanced approach behavior toward consumer-dense retail environments when they perceive the threat of physical harm, such as may be associated with Black Friday or Boxing Day shopping. Retail environments that are inconsistent with the consumer's self-concept or crowds that represent an out-group may not enhance approach behavior, as consumers prefer self-concept consistency and frequently align consumption with their in-groups (Escalas & Bettman, 2003). Future research should explore other conditions under which socially excluded consumers may not view consumer-dense retail environments as desirable.

Pair 4

Pair 4



Study 2

Study 2



Study 3

Study 3



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