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## **Context Effects in Word-Of-Mouth Communications: the Effect of Crowdedness on Social Transmission**

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We study how the perceived crowdedness of the environment affects WOM sharing. We show that crowded places trigger feelings of lack of control which make consumers more likely to engage in WOM in order to restore control. This finding has relevant implications for real-time sharing on social media.

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# Context Effects in Word-Of-Mouth Communications: The Effect of Crowdedness on Social Transmission

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## EXTENDED ABSTRACT

The development of new technologies has increased the amount of word of mouth (WOM) that occurs in places where the sharer is surrounded by others. For instance, consumers often engage in WOM in stores, by posting on social media their comments about what they have just bought. Events and conferences often encourage participants to share information by posting content on social media to increase buzz. In these cases, consumers share information in places that can be particularly crowded.

In this research, we investigate the effect of crowdedness on the likelihood to share information. We argue that people who are in more crowded places might feel to be less in control over the environment around them than people who are in less crowded places. When individuals perceive that their personal control is threatened, they are likely to engage in behaviors aimed at restoring it (Kay et al. 2010; Langer 1975), and engaging in WOM may be one means for individuals to reaffirm their sense of control. Individuals engage in WOM to shape the impression others have of them (Berger and Heath 2007), to give advice (Fitzsimons and Lehmann 2004), and to instrumentally express their own personality in social contexts (Belk 1988; Berger 2014; Sirgy 1982), thus WOM may help individuals re-establish a sense of influence and control. We hypothesize that when being in crowded places, individuals experience a loss of control, which in turn makes them more likely to share information with others than when they are in less crowded places.

In study 1, 101 respondents from an online subject pool were required to be in a public space and to use a GPS enabled hand-held device (such as a smartphone or a tablet) such that we could verify their approximate location. First, respondents indicated where they were completing the survey (bar, library, café, restaurant, etc.) Next, they rated how noisy and crowded their location was. Subsequently, respondents read an article about a product, and they indicated how likely they would be to share this content with other people. Finally, participants completed a reactance measure (Hong and Page 1989). Reactance is a motivational state that is aroused when a behavioral freedom – such as personal control – is threatened or eliminated, and that in turn triggers behaviors aimed at restoring this freedom (Brehm 1966; Wicklund 1976). Trait reactance is the chronic individual tendency to experience reactance: highly reactant individuals tend to react more strongly to threats to their freedom (Brehm and Brehm 1981). For example, consumers with high chronic reactance who experience physical confinement have been shown to make more varied product choices as a way to reassert their behavioral freedom, as compared to individuals with lower chronic reactance (Levav and Zhu 2009). Thus, if the effect of crowdedness on word-of-mouth is driven by the desire to compensate for a perceived loss of control, then the positive indirect effect of crowdedness through perceived control should be observed among those individuals who have a higher chronic reactance, because these individuals should be strongly motivated to reestablish their control.

As hypothesized, as crowdedness increased, respondents perceived that they had less control ( $B = -.31$ ,  $t(93) = -3.36$ ,  $p = .001$ ). In turn, a greater lack of control led to greater likelihood to share, but only among respondents who had high chronic reactance—there was an interaction between perceived control and reactance ( $B = -0.42$ ,

$t(89) = -2.53$ ,  $p < .05$ ), and mediation analysis revealed a significant mediation for participants high in reactance (+1 SD; LLCI > 0, ULCI = .31). There was also a significant 95% bootstrap confidence interval for participants low in reactance (-1 SD; -0.38, < 0). Perceived crowdedness was correlated with noise ( $r = .79$ ,  $p < .001$ ), but all the effects outlined above hold even when noise is entered as a covariate in the model. These results suggest that the positive effect of crowdedness on sharing, mediated by perceived control, occurs among highly reactant people. Crowdedness instills a perception of lack of control, that in turn encourages greater sharing, among those people who are chronically more motivated to replenish their lost personal control.

In study 2, we tested our predictions by manipulating crowdedness. 119 business administration students participated in this study in exchange for course credit. Participants were assigned to one of two conditions: in the crowdedness condition, 6-8 participants were seated in a 4-person lab room; in the control condition, participants were seated in two adjacent 4-person lab rooms. First, participants read the same article as in study 1 and reported the likelihood that they would share that article with others. Next, they completed a short version of the PANAS (Watson, Clark, and Tellegen 1988) and an arousal measure (Thayer 1989). Subsequently, participants completed a scale that measured their chronic need for control (Burger and Cooper 1979), and the same measure of reactance as in study 1. Finally, participants rated how crowded and noisy the lab room was.

Results revealed a significant two-way interaction between crowdedness condition and need for control ( $B = 1.09$ ,  $t(115) = 1.91$ ,  $p = .01$ ): participants with high need for control (+1SD) were more likely to share the product information when they were in a crowded room, compared to their counterparts who were in a less crowded room ( $B = 1.27$ ,  $t(115) = 2.85$ ,  $p < .01$ ). There was no effect for crowdedness among participants with low need for control ( $p > .29$ ). Noise, negative affect, and arousal were similar between conditions, thus they are unlikely to explain the observed effects.

This research sheds light on the effect of the physical context in which WOM occurs on WOM sharers' behavior, and it suggests that information sharing can be an important means through which individuals can restore a lost sense of control. Our work has also interesting managerial implications. Marketing practitioners can address targeted real-time communications to consumers when they are in crowded spaces or push their social media campaigns in places that a high number of people attend everyday (e.g., trains or metro stations).

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