

Scarcity Effects on Consumers' Affective, Cognitive, and Conative Responses:
A Moderating Role of Shopping Orientation

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Background and Purpose. Scarcity is a long-established marketing tactic. Marketers often implement semantic cues (e.g., “three days only,” “only 5 units left”) in their promotional messages to deliberately convey an idea that the offering is scarce and will become unavailable soon. Scarcity accelerates decision makers’ perceived perishability of an offer, limiting their freedom to delay the purchase decision and creating a sense of urgency for an immediate action (Byun & Sternquist, 2012). Despite the ubiquity of scarcity practices, theoretical and empirical explanations of the integrative psychological mechanism underlying the scarcity effect have been scant. Thus, the purpose of this study is to address this literature gap.

Theoretical Framework & Hypotheses. A major premise of scarcity principles, based on the commodity theory (Brock, 1968), is that scarcity leads to decision biases, known as ‘scarcity bias’ or ‘scarcity effect,’ by increasing the subjective value of an offering. A number of studies show that the scarcity of an offering increases favorability of the offering and accelerates purchases, but how this bias happens in human minds is little known.

The level of positive arousal (such as excitement) correlates with the intensity of desire for buying the product. Wright (1992) suggests that the difficulty of a task to satisfy a need energizes a person, generating ‘motivational arousal,’ which in turn determines actual effort made to complete the task. Thus, we contend that scarcity of an offering triggers the urgent sense that attaining the offering may soon become difficult, stimulating the motivational arousal. Therefore, we hypothesize that greater arousal is experienced toward scarce (vs. not scarce) offerings (H1). The arousal induced by scarcity may be misattributed to a superiority of the product itself, inflating consumers’ perceived benefits of the product. The literature suggests that purchases are driven by consumers’ perceptions of the functional, experiential, and symbolic benefits of the offering (Keller, 1993). Accordingly, we hypothesize that scarcity has a positive effect on the perceived (a) functional, (b) experiential, and (c) symbolic benefits of the product (H2), and that due to the enhanced arousal and perceived benefits, scarcity boosts buying intention (H3). Finally, literature suggests that hedonic (vs. utilitarian) shoppers are more likely to be impulsive and less goal-directed in shopping (Beatty & Ferrell, 1998). We propose that given the effect of scarcity on consumers’ positive arousal, hedonic shoppers, who enjoy shopping, are likely to experience the scarcity effect (on arousal, perceived benefits, and buying intention) more profoundly than utilitarian shoppers (H4).

Methods. An online experiment was conducted with a convenience sample of 203 college students. Three products (books, shower curtains, watches) were selected from a pretest as stimulus products. Participants were randomly assigned to either the treatment condition (scarcity) or the control condition (no scarcity) for each of the three products. For each product,

participants first viewed an experimental stimulus, which is a mock promotional ad depicting product images along with a text corresponding to the participants' assigned condition (i.e., "40% off - Today Only" for the scarcity condition; "40% off - Always" for the no-scarcity condition). After reviewing the mock promotional ad, participants completed the manipulation check measure (perceived scarcity) and dependent measures (functional, experiential, and symbolic benefit perceptions, arousal, and buying intent). Participants repeated this process for the three products, and then completed the utilitarian-hedonic shopping orientation measure and demographic items.

Results. The scarcity manipulation check was successful in that the scarcity condition was perceived to be significantly scarcer than the no-scarcity condition for all three products ($p < .001$). Participants were grouped into utilitarian vs. hedonic shoppers based on the median split of their shopping orientation score. A 2 x 2 (scarcity x shopping orientation) multivariate analysis of variance (MANOVA) was conducted for each product data, which revealed significant main effects and interaction effects, warranting further univariate analyses. Univariate analyses of variance (ANOVAs) revealed varying results by product. Significant positive main effects of scarcity on arousal were observed for both shower curtains and watches, partially supporting H1. For buying intent, significant, positive scarcity main effects were found for shower curtains and watches, and a marginally significant scarcity effect for books ($p = .09$), partially supporting H3. With regard to benefit perceptions, significant positive main effects of scarcity were found for functional benefits of watches, partially supporting H2. On the other hand, for books, no significant scarcity main effects were found, but significant scarcity x orientation interaction effects were obtained for arousal as well as perceived symbolic and functional benefits, partially supporting H4. Specifically, hedonic (vs. utilitarian) shoppers' arousal and benefit perceptions were higher in the scarcity condition but lower in the no-scarcity condition.

Implications and Recommendation. The scarcity effects on consumers' affective response (arousal) and conative response (buying intent) were relatively robust across the three products through the main or interaction effects, suggesting the strong role of scarcity in stimulating consumers' emotional decision making. However, scarcity effects on consumers' cognitive responses regarding the three product benefit dimensions differed across the products. Thus, further research is needed to delve into the personal or situational factors that lead to differential scarcity effects on consumers' cognitive information processing of product benefits.

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