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Journal of Consumer Psychology 25, 2 (2015) 245 – 256

JCP JOURNAL OF CONSUMER PSYCHOLOGY

Research Article

The preference-signaling effect of search

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Received 7 March 2012; received in revised form 5 September 2014; accepted 15 September 2014
Available online 23 September 2014

Abstract

Consumers often make choices in settings where some alternatives are known and additional alternatives can be unveiled through search. When making a choice from a set of alternatives, the manner in which each of these was discovered should be irrelevant from a normative standpoint. By contrast, we propose that consumers infer from their own decisions to search for additional alternatives that previously known alternatives are comparatively less attractive, and that this results in an increase in preference for an alternative precisely because it was initially out of sight (rather than known). Evidence from four experiments provides support for this theorizing, demonstrating that — paradoxically placing an alternative out of sight (while providing the consumer with the opportunity to unveil it) can render that alternative more likely to be chosen. Moreover, the findings indicate that this shift in preferences is driven specifically by a devaluation of alternatives that were known prior to the decision to search. Finally, the preference-signaling effect of search is shown to be persistent in that it systematically influences a consumer's subsequent choices among new alternatives.

Keywords: Preference; Choice; Search; Self-perception; Out-of-sight alternatives

Search is costly to consumers. Therefore, conventional wisdom suggests that it is in a firm's best interest to minimize the need for consumer search with respect to its own offerings. Indeed, vendors typically spend substantial amounts of money to advertise their products and services, thus making it easier for consumers to find out about them and reducing the need for consumer search (Ehrlich & Fisher, 1982; Nelson, 1974). Moreover, Wernerfelt (1996) argued that profit-maximizing firms should design efficient communication plans that provide as much information as possible to prospective customers and that minimize the latter's cost of acquiring this information.

In sharp contrast to this view, we propose that it can actually be detrimental to a firm if its offerings are immediately within consumers' sight. The proposed underlying mechanism is that when a consumer chooses to engage in effortful search to unveil an additional alternative (e.g., making the effort to visit a store or web site), this serves as a signal to the consumer about her own preference — a psychological mechanism in line with self-perception theory (Bem, 1967, 1972). In particular, the consumer infers from her decision to engage in the costly discovery of an additional alternative a reduced preference for the alternative(s) she knew about prior to that. Thus, paradoxically, placing an alternative out of sight (while providing the consumer with the opportunity to unveil it) can render that alternative more likely to be chosen.

Consumers must often decide between (1) choosing among a set of previously discovered alternatives and (2) searching to discover additional alternatives before making a choice. A substantial body of prior work examines consumer choice from pre-determined sets of alternatives. As a result, we know much about the influence of choice set composition and decision context on choice (e.g., Bettman, Luce, & Payne, 1998; Simonson, 1989). Similarly, work on search behavior addresses important questions such as what governs the extent of search

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http://dx.doi.org/10.1016/j.jcps.2014.09.003
1057-7408/

and, in particular, how we decide whether to stop or continue searching at a given point in the search process (e.g., Häubl, Dellaert, & Donkers, 2010; Weitzman, 1979). However, the interplay between search and choice has escaped research attention. In fact, prior research tends to assume that the two are independent. The present work refutes this assumption by showing that search behavior has a systematic effect on choice.

The previous research has studied search both from an analytical perspective, producing microeconomic models of optimal search behavior considering both the costs and the anticipated benefits of search (e.g., Ratchford, 1982; Rothschild, 1974; Stigler, 1961; Weitzman, 1979), and from an experimental perspective, examining how actual search behavior departs from the prescriptions of normative models (e.g., Brannon & Gorman, 2002; Schotter & Braunstein, 1981). Recently, Häubl et al. (2010) developed and empirically validated models of search behavior that incorporate psychological influences in addition to microeconomic principles. While prior work in this domain treated search behavior as the outcome of interest, the present research examines how *engaging in search* — i.e., unveiling an alternative that is initially out of sight *influences preference* among a set of alternatives.

The remainder of this article is organized as follows. First, we review relevant prior work, develop our key hypotheses about the signaling effect of search, and characterize the psychological mechanism proposed to underlie this effect — inferences about one's own preferences through self-perception. After that, we present evidence from four experiments designed to demonstrate the overall effect and examine the underlying mechanism. We conclude with a discussion of the theoretical and practical implications of our findings.

Theoretical framework

Consumer purchase decisions typically involve some uncertainty as to which of the available products to choose (Muthukrishnan, 1995; Urbany, Dickson, & Wilkie, 1989). Moreover, consumers often do not have well-defined preferences and, when making purchase decisions, they tend to construct their specific preferences on the fly based, in part, on properties of the decision environment or context (Bettman et al., 1998; Häubl & Murray, 2003; Mandel & Johnson, 2002). We argue that, in the face of such uncertainty, consumers may observe their own behavior of unveiling additional alternatives, and then use these observations as input in the construction of their preferences for an impending purchase decision.

The notion that an individual might make inferences about her own attitudes, emotions, and other internal states by observing her own behavior is the central tenet of self-perception theory. In his seminal work, Bem (1967, 1972) extended attribution theory from the person-perception domain into the self-perception domain, arguing that people attempt to validate not only their perceptions of others, but also their perceptions of themselves by observing their own behavior. For a behavior to be indicative of, and thus be used as a basis for making inferences about one's attitudes, it must be perceived as relevant and salient (Salancik & Conway, 1975). The act of unveiling an out-of-sight alternative clearly has these properties with respect to a choice that a consumer is facing.

We note that self-perception theory was initially proposed as an alternative account for behaviors previously explained by the theory of cognitive dissonance (Bem, 1967); and there are many situations where what is observed is consistent with both of these theories. However, we concur with Fazio, Zanna, and Cooper (1977) that, while cognitive dissonance theory (Festinger, 1957) is most applicable when one engages in a behavior that is in conflict with a strongly held attitude, self-perception theory (Bem, 1967, 1972) is best suited for understanding how one's actions influence formation of one's attitudes when the latter are uncertain. A consumer's decision to search for an additional alternative before making a choice is unlikely to result in a conflict with a strongly held attitude and thus arouse dissonance. By contrast, since consumers are often uncertain about their preferences (Bettman et al., 1998; Häubl & Murray, 2003; Mandel & Johnson, 2002), it is conceivable that the decision to unveil an out-of-sight alternative might serve as a signal from which consumers infer their own preferences via a self-perception mechanism.

In particular, we propose that consumers perceive their decision to engage in the costly discovery of additional alternatives as informative about their unfavorable disposition toward alternatives that they had already considered. This proposition is consistent with prior work by Brehm (1956), who demonstrated that, relative to pre-choice ratings, rejected alternatives were rated as less desirable following the selection of a competing alternative. Furthermore, if consumers do not know anything about an out-of-sight alternative prior to search, they have no basis for inferring that their decision to search indicates a favorable disposition toward the out-of-sight alternative. Thus, we hypothesize that the act of unveiling additional alternatives through search results in the *devaluation* of previously known alternatives. In turn, this devaluation leads to an increase in the probability that the consumer chooses an alternative that was initially out of sight. The essential predictions associated with this preference-signaling effect of search are captured by the following two hypotheses.

H1. Removing an alternative from sight while giving consumers the opportunity to unveil it increases preference for that alternative among those who choose to unveil. This enhanced preference can be strong enough to increase the alternative's overall (i.e., unconditional) choice probability.

H2. The increase in preference for alternatives that were initially out of sight is driven (mediated) by the devaluation of previously known alternatives.

Research on self-perception theory suggests that a behavior must be attributed to internal rather than external forces in order to serve as a basis for inferences about one's own internal state (Hansen, 1980; Kelley, 1973; Reingen & Kernan, 1977). According to this work, people are less likely to draw conclusions about their own attitudes on the basis of actions that are attributed to external forces than actions that are perceived to have been