

# Coloring Decisions: The Effect of Red and Blue Colors on Consumer Behavior

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## EXTENDED ABSTRACT

Colors play an important role in affecting our perceptions. They form an integral part of our daily lives, influencing our interactions with other individuals and with inanimate objects. Colors are ubiquitous in consumer contexts. Identical products are often sold in different colors or with different colors of packaging. Shopping mall walls, aisles, and displays use multiple colors. Web site backgrounds and product displays use varied colors. Colors are integral in advertisements and in company logos. In spite of its importance, however, little is known about how color affects consumer behavior (Elliot et al. 2007).

The literature on animal behavior suggests that red signals vigor and dominance among animals and induces aggression (Andersson et al. 2002; Cuthill et al. 1997). Similarly, physiological studies of human responses to color reveal that exposure to red versus blue colors increases irritability and decreases patience (Bellizzi, Crowley, and Hasty 1983). In laboratory studies using retail scenarios, Bellizzi and colleagues (Bellizzi et al. 1983; Bellizzi and Hite 1992) find that although warm colors (red, yellow) attract more attention, these colors are less likely to lead to purchases relative to cool colors (green, blue). However, prior studies are inconclusive about whether these color differences affect individual-level aggression in social contexts, and whether colors influence consumers' willingness-to-pay.

The present research investigates the influence of red versus blue colors on aggression in social settings and on consumers' willingness-to-pay in auctions and negotiations. In doing so, we seek to make two important contributions. First, we explicitly test the proposition that red enhances aggression relative to blue in social situations (study 1). Second, and more importantly, we investigate how color influences consumers' monetary transactions (studies 2-4). In study 2 we show that red induces more aggressive bidding relative to blue in laboratory auctions with real money. In study 3 we analyze data from eBay auctions and demonstrate that these effects also manifest in real-world settings. Finally, in study 4 we investigate the role that color plays in negotiations and demonstrate that red induces more aggressive negotiation relative to blue.

## Summary of Findings

We find that red induces greater aggression relative to blue, while blue increases patience relative to red in social settings (study 1). We also demonstrate the effect of color on aggression in auctions (studies 2-3) and negotiations (study 4). In auctions, buyers attempt to "win" the auctioned product by outbidding other potential competitors. In such instances, aggression induces bidders to offer higher bid jumps (Sinha and Greenleaf 2000). Correspondingly, we find that buyers offer higher bid jumps when a product is sold using a red background relative to when it is sold using a blue background. We demonstrate these effects in auctions conducted in the lab with real money (study 2) as well as in eBay auctions (study 3).

In contrast, in negotiations, where a buyer negotiates one-on-one with a seller, aggression typically entails eliciting unilateral concessions from the opponent (Ganesan 1993). In price negotiations, a more aggressive buyer would try to reduce the buying price. As expected, we find that red color reduces buyers' willingness-to-pay relative to blue colors. We also find that buyers negotiating the purchase of the red product report a lower likelihood of being persuaded to increase their willingness-to-pay than do people who see the blue product (study 4). This likelihood of persuasion

measures the effect of color on willingness-to-pay. These results are consistent with those of Bellizzi and Hite (1992) who find lower purchase incidences with red colors relative to blue in a scenario study conducted in a lab.

## Implications

We find that red induces greater aggression in consumer purchase contexts, such as in auctions and negotiation settings, relative to blue. In auction settings, aggression leads to higher bids, and bidders who see red (vs. blue) pay more. Thus, bidders are worse off (but sellers are better off) in auctions with red (vs. blue) listings. In contrast, in negotiation settings, red reduces buyers' willingness-to-pay. Thus, buyers are better off (but sellers are worse off) in negotiations where buyers see red (vs. blue). These results are consistent with the findings of Bellizzi and Hite (1992), who find that red colors reduce purchase incidences relative to blue.

Our findings provide a possible explanation, demonstrating that red reduces buyers' willingness-to-pay as well as buyers' willingness to be persuaded to consider higher prices relative to blue. Thus, our results document conditions where red may be beneficial as well as detrimental from the seller's perspective.

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