

DRIVING STATUS CONSUMPTION THROUGH IMAGINED VERTICAL MOVEMENTS

Consider Mary and John, who are prompted by an advertisement to imagine taking an elevator ride. Mary imagines going 20 floors up, whereas John imagines going 20 floors down. After this imagery exercise, both report their willingness to pay for a status product, such as an expensive car. Can the scenario imagined affect their responses? We show that this is indeed the case, and, in particular, that status consumption can be affected by imagining oneself moving up or down.

Past research shows that status products can be consumed to (re-)affirm one's sense of worth (Gao, Wheeler, and Shiv 2009; Rucker and Galinsky 2008; Sivanathan and Pettit 2010). For example, receiving feedback that threatens one's sense of worth leads to higher willing to spend for products with self-affirmation values such as exclusive watches or prestigious cars (Sivanathan and Pettit 2010). We extend this research by showing that merely imagining oneself moving downward or upward affects self-worth and, in turn, preference for status products.

This prediction draws on theories of embodied cognition (Gallese and Lakoff 2005) suggesting that the brain areas that process sensory-motor experiences might become interconnected with brain areas that process abstract concepts. According to this literature, vertical movements are associated with the notion of "more or less:" Upward movements become associated with higher estimates of quantity, whereas downward movements become associated with lower estimates of quantity (Lakoff and Johnson 1980). Furthermore, because quantity is associated with "better," as indicated by the metaphorical association between "more is better" (Lakoff and Johnson 1980), an object that moves up might be associated with higher values, as suggested by expression such as "the stock market went up." Following this reasoning, we propose that moving upward enhances self-worth, whereas imagining moving downward reduces self-worth. Because threats to self-worth might increase compensatory

consumption, we suggest that merely imagining oneself moving up or down affects preferences as well as choices for status products. This prediction is tested in the following two studies.

Study 1 investigated whether imagined vertical movements drive status consumption. Fifty-nine participants were guided by an audio to imagine entering an elevator and going either up from the 10th to the 30th floor or down from the 50th to the 30th floor. Participants then reported the vividness of their imagination and the floors on which they entered and exited the elevator, before being introduced to a series of unrelated studies, including a “Car Study” adapted from Sivanathan and Pettit (2010) where they considered a choice between two pre-owned cars: A BMW sedan (high-status option) and a Kia sedan (low-status option). A manipulation check confirmed that the BMW had higher status than the KIA. Participants were informed that the pre-owned KIA was sold for \$15,175 and reported how much more they were willing to pay for the BMW (1 = 0% more; 12 = 110% more)¹. Responses on the willingness to pay question were log-transformed and regressed onto a variable for whether participants imagined moving up (= 1) or down (= 0). As expected, participants who imagined going down were willing to pay more to buy the BMW (geometric mean = 43.5 % more than the Kia’s price) than those who imagined going up (geometric mean = 25.5%), $\beta = -.41$, $t(47) = 2.21$, $p = .03$. In particular, participants who imagined moving downward were willing to pay about \$2,700 more to purchase the BMW than those who imagined moving upward.

Study 2 tested the mechanism underlying the effect of imagined vertical movements on preference for status products. Following the procedure described in Study 1, 207 undergraduate students were randomly assigned to one of the two elevator scripts and then introduced to a supposedly unrelated study that included the two target measures of self-worth: “I have high self-esteem” (Robins,

¹ Observations from ten participants were not included in the analysis. Eight for having spent less than 3 seconds on the introductory paragraph of the “Car Study,” and two for reporting the wrong starting and ending floor indicated in the audio file, suggesting they did not read/listen to the instructions.

Hendin, and Trzesniewski 2001) and “On the whole, I am satisfied with myself” (Rosenberg 1965), $r = .56$. After a series of unrelated studies, all participants were asked to identify appropriate prize rewards for an upcoming study. The target product choice was between a \$20 gift certificate for “movie theater tickets” and a \$20 gift certificate for “books” (1 = definitely movie tickets, 7 = definitely books). Previous research (Gao et al. 2009) suggests that books offers greater ability to restore self-worth than movie tickets, as confirmed by our pretest. Therefore, we expect that imagining downward movements increases preferences for books².

Preference for Books over Movie Tickets. Responses on the preference question were log-transformed to reduce positive skewness and regressed onto a variable for whether participants imagined moving up or down. Results from the regression analysis supported our prediction, ($\beta = -.22$, $t(195) = 2.03$, $p = .04$). People who imagined going 20 floors down reported greater preference for books (1 = definitely movie tickets, 7 = definitely books) over movie tickets (geometric mean = 2.19) than those who imagined going 20 floors up (geometric mean = 1.76).

Self-worth. The self-worth scale was reflected and log-transformed to reduce negative skewness. Self-worth was affected by the direction of movement, ($\beta = -.13$, $t(195) = 2.32$, $p = 0.2$). Results show that people who imagined going down (geometric mean = 2.60) reported lower self-worth than those who imagined going up (geometric mean = 2.29; since the self-worth scale was reflected, higher scorers indicate lower self-esteem).

Mediation Analysis. We suggest that imagining moving down decreases self-worth which, in turn, leads to higher preference toward books as a way to restore the reduced sense of worth. To test this mediation hypothesis, we conducted regression of the choice between books over movie tickets, on

² Observations from ten participants were discarded. Three for having reported the wrong starting and landing floor, and seven because they were outliers on standardized residuals. The final sample included 197 participants.

sense of direction, and self-worth (Baron and Kenny 1986). Participants' self-worth significantly predicted choice for books over movie tickets ($\beta = .30, t(194) = 2.10, p = .04$). Since the score of self-worth was reflected, this finding shows that lower self-worth was associated to greater preference for books over movie tickets. By contrast, the effect of sense of direction was reduced ($\beta = -.18, t(194) = 1.67, p = .10$). Furthermore, a bootstrap analysis (Preacher and Hayes 2008) found that the 95% bias-corrected confidence interval (-.108 to -.002) of the indirect effect did not include zero, hence indicating statistical significance at .05.

Overall, our work extends research on status consumption and embodied cognition by showing that imagined downward (upward) movements decrease (increase) self-worth and, in turn, consumption of status products. This finding has important implications for decision making and advertising. As an example, consider the television commercial for Gillette Venus (a line of women's razors) showing a woman taking an elevator up a few floors. Our results suggest that these scenes might affect consumers' self-worth as well as subsequent consumption choices.

References

- Baron, R. M. and D. A. Kenny (1986), "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations," *Journal of Personality and Social Psychology*, 51 (6), 1173-82.
- Gallese, V. and G. Lakoff (2005), "The Brain's Concepts: The Role of the Sensory-Motor System in Conceptual Knowledge," *Cognitive neuropsychology*, 22 (3), 455-79.
- Gao, L., S. C. Wheeler, and B. Shiv (2009), "The 'Shaken Self': Product Choices as a Means of Restoring Self-View Confidence," *Journal of Consumer Research*, 36 (1), 29-38.
- Lakoff, G. and M. Johnson (1980), *Metaphors We Live By*, Chicago and London: The University of Chicago Press.
- Preacher, K. J. and A. F. Hayes (2008), "Asymptotic and Resampling Strategies for Assessing and Comparing Indirect Effects in Multiple Mediator Models," *Behavior Research Methods*, 40 (3), 879.

Robins, R. W., H. M. Hendin, and K. H. Trzesniewski (2001), "Measuring Global Self-Esteem: Construct Validation of a Single-Item Measure and the Rosenberg Self-Esteem Scale," *Personality and Social Psychology Bulletin*, 27 (2), 151.

Rosenberg, M. (1965), *Society and the Adolescent Self-Image*, Princeton: NJ Princeton University Press.

Rucker, D. D. and A. D. Galinsky (2008), "Desire to Acquire: Powerlessness and Compensatory Consumption," *Journal of Consumer Research*, 35 (2), 257-67.

Sivanathan, N. and N. C. Pettit (2010), "Protecting the Self through Consumption: Status Goods as Affirmational Commodities," *Journal of Experimental Social Psychology*, 46 (3), 564-70.