Do Green Products Make Us Better People?

Nina Mazar, Chen-Bo Zhong

University of Toronto

In Press at Psychological Science

Abstract

Consumer choices not only reflect price and quality preferences but also social and moral values as witnessed in the remarkable growth of the global market for organic and environmentally friendly products. Building on recent research on behavioral priming and moral regulation, we find that mere exposure to green products and the purchase of them lead to markedly different behavioral consequences. In line with the halo associated with green consumerism, people act more altruistically after *mere exposure* to green than conventional products. However, people act less altruistically and are more likely to cheat and steal after *purchasing* green products as opposed to conventional products. Together, the studies show that consumption is more tightly connected to our social and ethical behaviors in directions and domains other than previously thought.

Do Green Products Make Us Better People?

In the past few decades consumers have become increasingly attentive to social and ethical considerations such as energy consumption, animal husbandry, and fair trading (Chen, 2001; Crane, 2001; Torjusen, Lieblein, Wandel, & Francis, 2001). This increased concern and feeling of responsibility for society has led to remarkable growth in the global market for environment-friendly products (Hunt & Dorfman, 2009). At the heart of this trend, which is often referred to as ethical consumerism or green consumption (Anderson & Cunningham, 1972; Kinnear, Taylor, & Ahmed, 1974), lies the assumption that purchasing choices not only express price and quality preferences (Monroe, 1976) but also norms, values, and beliefs (Caruana, 2007; Irwin & Baron, 2001). This assumption has motivated a stream of research focusing on identifying the "green consumer" by socio-demographic variables, personality measures, or values that are directly related to environmental consciousness (e.g., Schlegelmilch, Bohlen, & Diamantopoulos, 1996; Shrum, McCarty, & Lowrey, 1995).

What has not been sufficiently understood is how green consumption fits into our global sense of social responsibility and morality and affects behaviors outside of the consumption domain. Based on recent theories in behavioral priming and moral regulation, we argue that mere exposure to green products versus purchasing them will have markedly different effects on subsequent behaviors. While mere exposure can activate concepts related to social responsibility and ethical conduct and induce corresponding behaviors, purchasing green products may produce the counterintuitive effect of licensing asocial and unethical behaviors by establishing moral credentials. Thus, green products do not necessarily make us better people.

Mere Exposure to Green Products

A large literature on priming has found that social behaviors can be primed by subtle environmental cues. For example, exposure to exclusive restaurant-pictures can improve manners in a subsequent eating task (Aarts & Dijksterhuis, 2003). Similarly, priming "loyalty" through a benign verbal task can increase in-group favoritism and identification (Hertel & Kerr, 2001). These results are often interpreted as an activation of norms and goals associated with environmental cues that solicit consistent behaviors. Recent research in the field of consumer behavior has demonstrated similar effects. Fitzsimons, Chartrand, and Fitzsimons (2008), for instance, showed that exposure to the Apple logo increased creativity. Given that green products are manifestations of higher ethical standards and humanitarian considerations, we expect that mere exposure to green products will activate norms of social responsibility and ethical conduct and increase corresponding behaviors.

Purchase of Green Products

Unlike early studies that tend to examine individuals' moral reasoning and reactions to isolated events, recent developments in moral psychology emphasize the importance of a global sense of morality (e.g., Zhong, Liljenquist, & Cain, 2009). These theories suggest that our moral behaviors are figured into an implicit calculation of self-perception where virtuous behaviors boost moral self-image while transgressions dampen it. Although people prefer to have a positive moral self, maintaining it often comes at a cost because social and ethical dilemmas usually involve conflicts of interest. Thus, people tend to be strongly motivated to engage in pro-social and ethical behaviors if their moral self is threatened by a recent transgression; they are least likely to scrutinize moral implications and regulate their behaviors right after their moral self experienced a boost from a good deed. This implies that virtuous acts can license subsequent asocial and unethical behaviors.

Several studies have demonstrated this licensing effect. For example, Monin and Miller (2001) found that a previous gender-egalitarian act licensed subsequent gender-discriminatory behavior. Similarly, Sachdeva, Iliev, and Medin (2009) found that reminding people of their humanitarian traits reduced charitable donations. Because purchasing green products affirms individuals' values of social responsibility and ethical consciousness, we predict that purchasing green products will establish moral credentials, ironically licensing selfish and morally questionable behavior.

Three experiments examine the effects of green products. Experiment 1 establishes that people attach higher social and ethical values to green than conventional consumerism. Experiment 2 demonstrates the opposing effects of *mere exposure* to green products and *purchasing* green products on altruistic behavior. Finally, Experiment 3 extends the licensing effect of purchasing green products to clear ethical violations: cheating and stealing money. Together these studies suggest that consumption is more tightly connected to our social and moral self than previously thought.

Experiment 1: Impressions of Green Consumers

Fifty-nine students (32 female) from the University of Toronto volunteered for a 5-minute survey. They were randomly assigned to either rate a person who purchases organic foods and environmentally friendly products or a person who purchases conventional foods and products on how cooperative, altruistic, and ethical they thought such a person to be using a 7-point scale (1 – Not at all, 7 – Very).

As expected, participants rated a person who purchases green products to be more cooperative (M = 4.75, SD = 1.37 vs. M = 3.62, SD = 1.76, $t(57) = 2.76$, $p = .008$, $p_{rep} = .956$), altruistic (M = 5.07, SD = 1.01 vs. M = 3.36, SD = 1.23, $t(57) = 5.81$, $p < .001$, $p_{rep} > .986$), and

ethical (M = 5.55, SD = 1.44 vs. M = 3.36, SD = 1.70, $t(57) = 5.35$, $p < .001$, $p_{rep} > .986$) than a person who purchases conventional products.

Experiment 2: Priming and Licensing

Experiment 1 confirmed that people attach higher social and moral values to green than conventional consumerism. This leads to two markedly different predictions: Based on research on behavioral priming, we predict that *mere exposure* to green products will increase subsequent altruistic conducts; however, based on recent theories on moral regulation, we predict that *purchasing* green products will reduce subsequent altruism because it establishes moral credentials. Experiment 2 tests these predictions using a one-shot anonymous Dictator Game.

One hundred fifty-six students (95 female) from the University of Toronto volunteered for an hour-long experiment in exchange for class credit. Participants were randomly assigned to one condition of a 2 (store: conventional vs. green) × 2 (action: mere exposure vs. purchase) between-participants design.

Upon arrival participants were led to a cubicle equipped with a computer and informed that they were going to engage in a number of unrelated tasks. They were first assigned to one of two online stores that carried a mix of green and conventional products but differed in the ratio of these two types of products: the green store carried nine green and three conventional products; the conventional store carried nine conventional and three green products (see Figures 1a and 1b). There was no difference in number of products, product categories, or price. Participants in the mere exposure condition were asked to rate each of the products on the aesthetics of design and the informativeness of description. Participants in the purchase condition were invited to select products that they would like to purchase. Participants were offered to fill

their baskets (maximum one item per product) up to $25 and were told that one out of 25 students would be randomly chosen to actually receive their purchased products[1].

Participant then engaged in an ostensibly unrelated "interpersonal interaction" task in which they were led to belief that they had been randomly paired with another person in a different room; in actuality, there was none. Participants were assured that their identity would be kept confidential. They were explained the rules of an anonymous Dictator Game that includes one initiator and recipient. The initiator has money ($6) to allocate between the self and the recipient. Initiators keep whatever they do not offer; recipients can choose to accept or reject the offer, but their choice only affects their own payoff. Participants were told that they had been randomly assigned to the initiator's role (even though they all played that role) and ensured that they would walk away with any amount of money they kept for themselves.

Neither store type (conventional vs. green) nor action (mere exposure vs. purchase) had a significant main effect on giving money, $F(1, 152) = .06$, $p = .806$, $p_{rep} = .271$ and $F(1, 152) = .27$, $p = .603$, $p_{rep} = .427$, respectively, but there was a significant interaction, $F(1, 152) = 4.45$, $p = .037$, $p_{rep} = .897$. Participants who were merely exposed to the green store shared more money ($M = 2.12$, $SD = 1.40$) than those exposed to the conventional store ($M = 1.59$, $SD = 1.29$), $F(1, 152) = 2.85$, $p = .094$, $p_{rep} = .824$. However, the result flipped in the purchasing conditions: participants who had purchased in the green store shared less money ($M = 1.76$, $SD = 1.40$) than those in the conventional store ($M = 2.18$, $SD = 1.54$), $F(1, 152) = 1.69$, $p = .195$, $p_{rep} = .728$.

The significant interaction supports our predictions. Green products embody social considerations such that *mere exposure* to them increases subsequent pro-social behavior. However, *acting* upon one's values establishes moral credential that can subsequently license deviating behavior. Given the growth of the green product market and the interconnectedness of

[1] Participants received only the products they purchased even if they did not spend all of the $25.

our everyday behavior it is an important question what are the limits of such a licensing effect. Experiment 2 showed a decrease in altruistic behavior, which can be undesirable from a welfare perspective but is not necessarily immoral. Next, we tested whether purchasing green products can establish enough moral credential to encourage clear transgressions such as lying and stealing.

Experiment 3: Licensing Lying and Stealing

Ninety undergraduate students (56 female) from the University of Toronto volunteered for this experiment in exchange for five Canadian Dollars. Participants were randomly assigned to one of two conditions (store: conventional vs. green). Upon arrival they were seated at desks equipped with a computer and one envelope containing $5 in different denominations. Participants were informed that they were going to engage in a number of unrelated tasks.

In the first task, they were randomly assigned to make purchases in either the conventional or green product store as in Experiment 2. Afterwards, they engaged in an ostensibly unrelated visual perception task in which they saw a box divided by a diagonal line on the computer screen (Mazar & Ariely, 2009). Participants were told that on each trial they would see a pattern of 20 dots scattered inside the box. The pattern would stay on the screen for one second, and participants had to press a key to indicate whether there were more dots on the left or right side of the diagonal line. Participants were paid 0.5 cent for each trial identified as having more dots on the left and 5 cents for each trial identified as having more dots on the right. The dots were always arranged such that one side clearly had more dots than the other side (15/14/13 vs. 5/6/7); thus it was fairly easy to identify the correct answer. We emphasized that it was important to be as accurate as possible because the results would help design future experiments.

Before the actual task participants were given a 30 trials-practice round (without pay) in which they could see their cumulative hypothetical earnings at the top of the screen updated after each trial. This was to let participants experience that the program would pay based on the key-presses, regardless of the answers being correct. Thus, once real pay was involved there would be a clear dilemma between reporting the correct answer and lying to earn more money.

The round with real pay consisted of 90 trials. Forty percent of trials had more dots on the right side (36 trials). Consequently, if 100% accurate, participants could make $2.07 in a task that lasted about 5 minutes. At the end of the 90th trial, participants saw a summary screen showing the total amount of money they had earned and instructing them to pay themselves by taking out the corresponding amount from the provided envelope. Thus, in addition to having the opportunity to lie, participants could also steal to increase their payoff[2].

We found a significant difference in performance in the dots task, t (79) = 2.26, p = .027, p_{rep} = .913. Participants who had purchased in the conventional store identified 42.5% (SD = 2.9%) of trials as having more dots on the right side, which was not significantly different from the actual 40% (t (37) = 1.66, p = .106, p_{rep} = .811). Participants who had purchased in the green store, however, identified 51.4% (SD = 2.67%) of trials as having more dots on the right side – suggesting they were lying to earn more money. Consequently, participants in the green store condition earned on average $0.36 more money than those in the conventional store.

In addition, independent of the decision to lie, participants could steal by taking out more money from the envelope than shown on the summary screen. Consistent with the previous finding, participants in the green store stole $0.48 more money from the envelope than those in the conventional store (M = $0.56, SD = $0.13 vs. M = $0.08, SD = $0.14), t (79) = 2.55, p =

[2] Nine participants did not pay themselves. They were excluded from analyses.

.013, p_{rep} = .942. Together, they left the experiment with on average \$0.83 (*SD* = \$0.23) more in their pockets than participants in the conventional store condition, t (70) = 3.55, p < .001, p_{rep} > .986.

General Discussion

People do not make decisions in a vacuum; their decisions are embedded in a history of behaviors. Across three studies we consider pro-social and ethical decision-making in the context of past consumer behaviors and demonstrate that the halo associated with green consumerism has to be taken with reservations. While *mere exposure* to green products can have a positive societal effect by inducing pro-social and ethical acts, *purchasing* green products may license indulgence in self-interested and unethical behaviors.

Our findings extend previous research on priming and licensing in two important ways. First, we explore the relationship between priming as "mere exposure" and other more deliberative processes (Bargh, 2006). Specific to the case of green products, people can be primed by green products in many occasions, for example, while watching a green product advertisement, walking by an organic store, or actually purchasing green products. Do all of these encounters have the same effect? By explicitly contrasting mere exposure with purchasing, we explored the compex interaction between two possible processes (priming and licensing). Our findings suggest that not all exposures have the same priming effect and that other processes (i.e. licensing) can negate or even substitute the priming effect.

Second, in previous research moral credentials and the behaviors they licensed were typically in the same domain (e.g., gender-egalitarian acts licensed gender-discriminatory behaviors, Monin & Miller, 2001; reminders of humanitarian traits reduced charitable donations, Sachdeva, Iliev, & Medin, 2009). We examine the licensing effect across seemingly unrelated

domains (i.e. purchasing, altruism, and honesty). Together, our studies suggest that social and ethical acts may contribute to a more general sense of moral self than previously thought, licensing socially undesirable behaviors in distant domains.

References

Aarts, H., & Dijksterhuis, A. (2003). The Silence of the Library: Environmental Control Over Social Behavior. *Journal of Personality and Social Psychology, 84*(1), 18-28.

Anderson, W. T., & Cunningham, W. H. (1972). The Socially Conscious Consumer. *The Journal of Marketing, 36*(3), 23-31.

Bargh, J. A. (2006). What Have We Been Priming All These Years? On the Development, Mechanisms, and Ecology of Nonconscious Social Behavior. *European Journal of Social Psychology, 36,* 147-168.

Caruana, R. (2007). A Sociological Perspective of Consumption Morality. *Journal of Consumer Behavior, 6*(5), 287-304.

Chen, C. (2001). Design for the Environment: A Quality-Based Model for Green Product Development. *Management Science, 47*(2), 250-263.

Crane, A. (2001). Unpacking the Ethical Product. *Journal of Business Ethics, 30*(4), 361-373.

Fitzsimons, G. M., Chartrand, T. L., & Fitzsimons, G. J. (2008). Automatic Effects of Brand Exposure on Motivated Behavior: How Apple Makes You "Think Different"☐. *Journal of Consumer Research, 35*(1), 21-35.

Hertel , G., & Kerr, N. L. (2001). Priming In-Group Favoritism: The Impact of Normative Scripts in the Minimal Group Paradigm. *Journal of Experimental Social Psychology, 37*(4), 316-324.

Hunt, N., & Dorfman, B. (2009, 28 January). How Green is My Wallet? Organic Food Growth Slows. *Reuters*. Retrieved from http://www.reuters.com.

Irwin, J. R., & Baron, J. (2001). Response Mode Effects and Moral Values. *Organizational Behavior and Human Decision Processes, 84*(2), 177-197.

Kinnear, T. C., Taylor, J. R., & Ahmed, S. A. (1974). Ecologically Concerned Consumers: Who Are They? *Journal of Marketing Research, 38*(2), 20-24.

Mazar, N., & Ariely, D. (2009). "What the Hell": Continuous Temptations and Escalation of Dishonesty. Unpublished Working Paper. University of Toronto.

Monin, B., & Miller, D. T. (2001). Moral Credentials and the Expression of Prejudice. *Journal of Personality and Social Psychology, 81*(1), 33-43.

Monroe, K. B. (1976). The Influence of Price Differences and Brand Familiarity on Brand Preferences. *Journal of Consumer Research, 3*(1), 42-49.

Sachdeva, S., Iliev, R., & Medin, D. L. (2009). Sinning Saints and Saintly Sinners: The Paradox of Moral Self-Regulation. *Psychological Science, 20*(4), 523-528.

Schlegelmilch, B. B., Bohlen, G. M., & Diamantopoulos, A. (1996). The Link Between Green Purchasing Decisions and Measures of Environmental Consciousness. *European Journal of Marketing, 30*(5), 35-55.

Shrum, L. J., McCarty, J. A., & Lowrey, T. M. (1995). Buyer Characteristics of the Green Consumer and Their Implications for Advertising. *Journal of Advertising, 24*(2), 71-82.

Torjusen, H., Lieblein, G., Wandel, M., & Francis, C. A. (2001). Food System Orientiation and Quality Perception Among Consumers and Producers of Organic Food in Hedmark County, Norway. *Food Quality and Preference, 12*, 207-216.

Zhong, C.-B., Liljenquist, K. A., & Cain, D. M. (2009). Moral Self-Regulation: Licensing & Compensation. In D. De Cremer (Ed.), *Psychological Perspectives on Ethical Behavior and Decision Making* (pp. 75-89). Charlotte, NC: Information Age Publishing.

Acknowledgements

This research was supported by the Social Sciences and Humanities Research Council of Canada.

Figure Captions

Figure 1a: Screen shot of the green store used in Experiments 2 and 3.

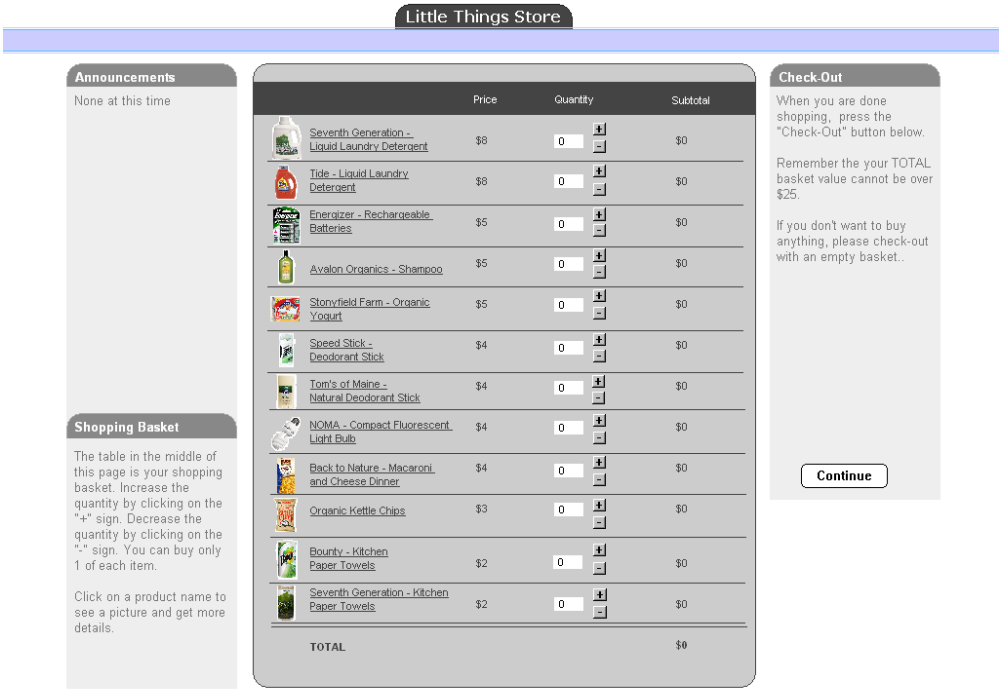

Figure 1b: Screen shot of the conventional store used in Experiments 2 and 3.