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### On justifying eco-unfriendly behaviors

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**Publication date**

2014

**Document Version**

Final published version

[Link to publication](#)

**Citation for published version (APA):**

Meijers, M. H. C. (2014). *On justifying eco-unfriendly behaviors*.

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# Chapter 3

## Self-Identity and Justification

This chapter is based on:

Meijers, M. H. C., Noordewier, M. K., Verlegh, P. W. J., & Smit, E.G. *Identity Relevance Moderates the Licensing Effect*. Revision invited for an international academic journal.



## Self-Identity and Justification

Consumers often make series of moral consumption decisions. For example, when taking a trip to the supermarket, they may have to decide between environmentally friendly and conventional alternatives when choosing laundry detergents, are offered organic options in the rice and pasta sections, and consider brands advertising donations to charities at the soda shelf. Research on moral consumer purchases, however, often studies these decisions in isolation, as one-shot choices rather than investigating consumer choices as a sequential-decision making process (e.g., Fielding et al., 2008; Whitmarsh & O'Neill, 2010). Recent research shows that it is important to investigate consumer choices in a sequential-decision context, since a consumption decision may be affected by a preceding decision (e.g., Cavanaugh et al., 2007; Dhar & Simonson, 1999; Ein-Gar & Steinhart, 2011; Khan & Dhar, 2006; Mukhopadhyay & Johar, 2009; e.g., Novemsky & Dhar, 2005). For instance, consumers may balance their current and previous consumption decisions such that they are more likely to indulge after they previously constrained themselves (Kivetz & Simonson, 2002; Mukhopadhyay & Johar, 2009).

A compelling explanation for balancing current and previous consumer decisions is provided by research on the licensing effect. This body of research suggests that prior virtuous or moral decisions may provide consumers with an internal justification to make subsequent vice or morally questionable decisions (e.g., Catlin & Wang, 2013; Khan & Dhar, 2006; Miller & Effron, 2010; Monin & Miller, 2001; Sachdeva et al., 2009). By performing morally laudable behavior, individuals accumulate moral credentials that subsequently provide them with a justification to behave in a morally dubious way. Mazar and Zhong (2010), for example, showed that individuals feel licensed to cheat after consuming environmentally friendly products. In the current article, we extend and unify previous research on the licensing effect. We argue and show that consumers will be less likely to show licensing effects in domains that are relevant to their identity – in other words: in identity relevant domains.

### **Moral Licensing Effects**

The moral licensing effect entails that engaging in a moral act makes individuals subsequently more likely to engage in a morally questionable act (e.g., Khan & Dhar, 2006; Mazar & Zhong, 2010; Merritt et al., 2010; Miller & Effron, 2010; Monin & Miller, 2001; Sachdeva et al., 2009). For example, when individuals are given the chance to disagree with sexist statements, they are afterwards more likely to make more sexist choices (Monin & Miller, 2001) and when individuals imagine donating money to charity they are subsequently more likely to cheat on a math task (Brown et al., 2011). These licensing effects are also demonstrated within the domain of consumer behavior. Khan and Dhar (2006), for example, showed that consumers felt licensed to engage in luxury consumption (i.e., buying designer jeans) after volunteering for charity, whereas Tiefenbeck et. al. (2013) showed that consumers felt licensed to increase their electricity consumption after lowering their water consumption.

The assumed mechanism underlying these licensing effects is that the initial moral behavior provides individuals with moral credentials which boost their moral self-regard. This subsequently ‘frees’ them to behave morally questionable (Khan & Dhar, 2006; Miller & Effron, 2010; Monin & Miller, 2001). Similarly, research shows that boosting one’s moral self-regard by recalling moral behaviors performed in the past leads to immoral behavior in the present. For example, recalling moral behaviors resulted in donating less

money to charity (Sachdeva et al., 2009), more cheating behavior on a math task (Jordan et al., 2011), and a lower intention to volunteer (Conway & Peetz, 2012).

While licensing effects appear to be prevalent in many different domains, we posit that they may not be the typical consequence of moral consumer decisions. We propose that an important determinant for whether licensing effects occur is whether the domain of consumption is identity relevant. So, when taking the example of how decreasing water consumption leads to increasing electricity consumption (Tiefenbeck et al., 2013), we expect that consumers will not feel justified to increase their electricity consumption when they have a strong environmental self-identity as this would be inconsistent with their identity.

### **Identity Relevant Behaviors**

Self-identity is the manner in which individuals see themselves and the labels they use to describe themselves (e.g., Aquino & Reed, 2002; Markus & Zajonc, 1985; Reed et al., 2012; Tajfel & Turner, 1986; Whitmarsh & O'Neill, 2010). By behaving in an identity congruent manner individuals show themselves and others who they are, therefore, identity typically influences behavior (Bem, 1967; Eagly & Chaiken, 1993; Taylor, 1975). For instance, individuals prefer global over local products when their global identity is salient (Zhang & Khare, 2009), they are more likely to behave morally when their moral identity is salient (Aquino, Freeman, Reed, Lim, & Felps, 2009), and they are more likely to consume ethical, fair trade products when they strongly identify as ethical (Ozcaglar-Toulouse, Shiu, & Shaw, 2006). Additionally, individuals who are forced to behave incongruent to their identity will compensate for this later on by behaving in an identity congruent manner (Verplanken & Holland, 2002). Identity thus drives behaviors in identity relevant domains, resulting in individuals behaving in an identity congruent manner (Bem, 1967; Erikson, 1964; Markus & Zajonc, 1985; Reed et al., 2012).

Combining this identity congruency perspective with the licensing effect raises the question whether licensing effects will occur in identity relevant domains. The assumption behind the licensing effect is that having established moral credentials frees individuals to justify morally questionable

behavior (e.g., Miller & Effron, 2010; Monin & Miller, 2001). It is unlikely, however, that consumers would want to behave incongruent to their identity within identity related domains. Indeed, research suggests that when a trait such as morality is valued by individuals, they strongly believe in being moral and they want to maintain this moral aspect of their self-concept (Kunda, 1987; Mazar et al., 2008; Sanitioso et al., 1990). Similarly, research suggests that individuals act consistent to their identity because having a certain identity creates the must to be true to this self-concept (Erikson, 1964; Reynolds & Ceranic, 2007). This suggests that consumers will not show licensing effects when the decision making domain is identity relevant. In the present article we will test this hypothesis that licensing effects are unlikely within identity relevant domains, focusing on the domain of environmentally friendly consumption.

### **Environmentally Friendly Consumption**

Environmental self-identity has a large influence on environmentally friendly behavior (e.g., Sparks & Shepherd, 1992; Van der Werff et al., 2013a; Whitmarsh & O'Neill, 2010), making the environmental domain particularly suitable to test our hypotheses. In addition, studying sequential behaviors is especially relevant in the environmental domain, since most studies investigate merely one-shot choices (Peattie, 2010). Finally, the impact of consumption on the environment makes it important to investigate environmentally friendly consumer behavior, and environmentally friendly consumption is highly relevant and timely as many companies are now making an effort to produce more environmentally friendly products to counter environmentally unfriendly consumption. In Unilever's "Sustainable Living Plan" the reduction of environmental impact is one of the key goals. Other examples include H&M launching environmentally friendly clothing lines, IKEA reducing energy use during transportation, and Nike recycling PET bottles for their apparel collection. The idea behind these efforts is to diminish the impact of consumption on the environment so to protect the environment.

Research on the licensing effect, however, suggests that these efforts may not always be fruitful. One environmentally friendly action may - ironically - provide consumers with a justification to subsequently behave environmentally unfriendly. In this way, the initial environmental

consumption may be offset by the subsequent environmentally unfriendly behavior. More problematic, even having the option of being environmentally friendly present serve as a justification to behave environmentally unfriendly (Catlin & Wang, 2013). By investigating the circumstances under which the licensing effect is less likely to occur, we hope to provide valuable insights that may have important practical implications.

### Overview of studies

In three studies, we systematically tested our proposition that licensing effects are mitigated in identity relevant domains. In Studies 3.1 and 3.2, we investigated whether the licensing effect within the environmental domain is especially likely for consumers with a weak environmental self-identity, whereas such a licensing effect is nullified for consumers with a strong environmental self-identity. In Study 3.3, we sought additional support for our proposition by excluding an alternative hypothesis.

#### Study 3.1: Environmental self-identity as a moderator

In Study 3.1, we sought to demonstrate that the licensing effect within the environmental domain is moderated by environmental self-identity. We hypothesized that participants imagining purchasing an environmentally friendly product would subsequently be less likely to report environmentally friendly intentions than participants imagining purchasing a conventional alternative. Importantly, we expected that this effect occurs *only* for participants with a weak environmental self-identity. Participants with a strong environmental self-identity will not show such a licensing effect.

### Method

**Participants and design.** Seventy participants ( $M_{age} = 22.57$ ,  $SD_{age} = 3.18$ , 70.0% female) were recruited using snowball sampling and were invited via e-mail to take part in an online study. They were randomly assigned to one of two conditions (type of purchase: conventional, environmentally friendly)<sup>4</sup>

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<sup>4</sup> As previous research showed that the licensing effect may operate proportionally, such that a larger previous moral behavior leads to a larger subsequent morally questionable behavior (Jordan et al., 2011), we initially designed three conditions: conventional, moderately environmentally friendly, and heavily environmentally friendly sneakers. The difference between the environmental



of a between subjects design. One outlier was detected in the control condition (based on Cook's distance) and therefore omitted from the analyses.

**Procedure.** We first measured participants' environmental self-identity by asking them to rate five items like "*I am concerned with environmental issues*" and "*I value being an environmentally friendly person*" and on a scale from 1 (*completely disagree*) to 7 (*completely agree*; based on Sparks & Shepherd, 1992), Cronbach's  $\alpha = .84$ . To manipulate whether participants behaved in an environmentally friendly manner they completed a task that was allegedly on the effectiveness of ads. Participants were asked to take their time to study an ad of sneakers of a well-known brand (Nike) and imagined buying the sneakers being advertised. We designed two ads depicting a pair of Nike sneakers. The ads were identical, except for the slogan. In *conventional* (i.e., control) condition the slogan emphasized the comfort of the sneakers whereas in the *environmentally friendly* (i.e., licensing) condition the slogan emphasized the organic, environmentally friendly nature of the sneakers.

**Dependent measure.** After imagining that they had bought the sneakers in the ad, participants were asked to complete the questionnaire regarding environmentally friendly behavioral intentions. Intentions were measured by using seven items like "*I would be willing to stop buying products from companies guilty of polluting the environment even though it might be inconvenient for me*" measured on a scale from 1 (*completely disagree*) to 7 (*completely agree*), Cronbach's  $\alpha = .67$  (based on Minton & Rose, 1997). Finally, participants were thanked for their participation and fully debriefed.

## Results and Discussion

To test our hypothesis, we performed an OLS regression with environmentally friendly intentions as dependent variable and type of purchase (conventional, environmentally friendly), environmental self-identity

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conditions existed of adding a prominent visual cue emphasizing environmental friendliness (i.e., an eco-logo) to the ad in the heavily environmentally friendly sneakers condition. We, however, found no evidence for this proportionality hypothesis as there were no statistical differences between the two environmental conditions,  $t < 1$ . We therefore decided to collapse the two environmental conditions into one single environmental condition for conciseness and clarity reasons. Please note that the results are the same when not collapsing the environmental conditions into one but analyzing them separately.

(standardized continuous predictor), and their interaction as predictors. The analysis revealed a significant interaction between type of purchase and environmental self-identity on the environmentally friendly intentions measures,  $b = 0.47$ ,  $se = 0.22$ ,  $t(65) = 2.17$ ,  $p = .033$  and a significant main effect of type of purchase,  $b = -0.48$ ,  $se = 0.20$ ,  $t(65) = -2.48$ ,  $p = .016$ . The main effect of environmental self-identity was not significant,  $b = 0.10$ ,  $se = 0.20$ ,  $t(65) = 0.48$ ,  $p = .635$ .

To interpret the interaction effect, we standardized the continuous variable environmental self-identity and conducted a spotlight analysis at one standard deviation below the mean (labeled *weak* environmental self-identity) and one standard deviation above the mean (labeled *strong* environmental self-identity, following Aiken & West, 1991; see Figure 3.1). As predicted, the analysis supported our hypothesis that only consumers with a weak environmental self-identity show a licensing effect. Namely, participants with a weak environmental self-identity were less likely to report environmentally friendly intentions after imagining purchasing environmentally friendly shoes than after imagining purchasing conventional shoes,  $b = -0.95$ ,  $se = 0.33$ ,  $t(65) = -2.88$ ,  $p = .005$ . By contrast, participants with a strong environmental self-identity were as likely to report environmentally friendly intentions after

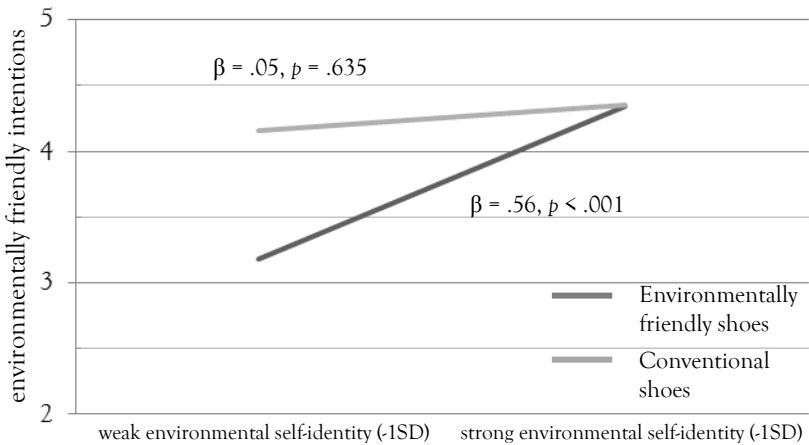


Figure 3.1. Figure showing the interaction effect of purchasing sneakers (i.e., organic, conventional) and individual differences in environmental self-identity on environmentally friendly intentions (1-7) in Study 3.1. The significance levels of the slopes are estimated by simple slope analyses (Aiken & West, 1991).

imagining purchasing environmentally friendly shoes as after imagining purchasing conventional shoes,  $b < 0.01$ ,  $se = 0.25$ ,  $t(65) = 0.02$ ,  $p = .987$ . In sum, consumers with a weak environmental self-identity are likely to show environmental licensing effects, whereas consumers with a strong environmental self-identity are unlikely to show environmental licensing effects. This supports our hypothesis that licensing effects are unlikely within identity relevant domains.

Note that this finding goes beyond the more general positive effect of identity on behavior that has been demonstrated in prior research (e.g., Erikson, 1964; Reynolds & Ceranic, 2007). Here, we postulate that consumers with a weak environmental self-identity will behave in an environmentally friendly manner (i.e., socially desirable) until they have established the moral credentials that makes them more comfortable with justifying environmentally unfriendly behavior. In other words, they need to be able to justify their environmentally unfriendly behaviors. By contrast, consumers with a strong environmental self-identity will consistently behave environmentally friendly, regardless of their prior behaviors.

### **Study 3.2: Replication of the moderation**

In Study 3.2 we aimed to conceptually replicate the finding that licensing effects are unlikely for identity relevant behaviors with a manipulation of actual purchasing behavior and different measures so to enhance the validity of our results. In this way, we can assess the validity and reliability of our results (Koole & Lakens, 2012).

### **Method**

**Participants and design.** Eighty-seven university students ( $M_{age} = 22.11$  years,  $SD_{age} = 5.45$ , 74.7 % female) participated in exchange for course credit and the chance of winning the outfit that they chose during the experiment (i.e., one person was randomly chosen and got a voucher to purchase the outfit they chose). Participants were randomly assigned to one of two conditions

environmentally friendly versus conventional purchase)<sup>5</sup> of a between-subjects design.

**Procedure.** Two weeks before the study was run in the lab, participants who signed up for the experiment were asked to complete an online questionnaire to assess their environmental self-identity. To enhance validity of our claims, we operationalized environmental self-identity in a different way than in Study 3.1. Participants completed six items measuring environmental intentions like “*I am willing to make personal sacrifices for the sake of slowing down pollution even though the immediate results may not seem significant*” measured on a scale from 1 (*completely disagree*) to 7 (*completely agree*), Cronbach’s  $\alpha = .82$  as a measure of environmental self-identity (see Clayton, 2003; Minton & Rose, 1997).

For the actual experiment two weeks later, participants came to the lab and were individually seated in the cubicles. They ostensibly participated in a series of unrelated studies on a personal computer. In order to manipulate whether participants engaged in environmentally friendly behavior, they completed a task that was allegedly on online shopping. Participants were asked to purchase an outfit for a night out on a website of a large well-known apparel chain (H&M) for about €100 (cf., Mazar & Zhong, 2010). We built two websites: one with *conventional apparel* (i.e., control condition) and one with *environmentally friendly apparel* that was made of organic cotton (i.e., licensing condition). Both websites offered the exact same apparel (e.g., shirts, blouses, pants) for both men and women. However, in the environmentally friendly web shop it was communicated that the apparel was environmentally friendly whereas in the conventional web shop there was no reference to environmental friendliness. After the participants had purchased their outfit, the experimenter wrote down which items they purchased and the participants completed a filler

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<sup>5</sup> As in Study 3.1, we initially designed three conditions: conventional, moderately environmentally friendly, and heavily environmentally friendly apparel web shop. The difference between the environmental conditions existed of adding a prominent visual cue emphasizing environmental friendliness (i.e., an organic cotton logo) to the web shop in the heavily environmentally friendly apparel condition. As in Study 3.1, we found no statistical differences between the two environmental conditions,  $t < 1$ . We therefore decided to collapse the two environmental conditions into one environmental condition for conciseness and clarity reasons. Again, as in Study 3.1, the results are the same when analyzing the environmental conditions separately.

questionnaire on their opinion regarding the website to keep up the appearance of the alleged goal of the experiment.

**Dependent measure.** Following this shopping task, we measured participant's environmental concern on a 7-point scale using a thirteen item scale with items like "Natural resources must be preserved even if people must do without some products" and "I feel angry and frustrated when I think about the harm being done to plant and animal life by pollution," Cronbach's  $\alpha = .89$  (based on Minton & Rose, 1997). Finally, participants were thanked for their participation, and fully debriefed on the nature of the experiment and the web shop.

## Results and Discussion

As expected, the OLS regression analysis with type of purchase (environmentally friendly versus conventional), environmental self-identity (a standardized continuous predictor), and their interaction as predictors revealed a significant interaction effect,  $b = 0.43$ ,  $se = 0.15$ ,  $\beta = .48$ ,  $t(83) = 2.86$ ,  $p = .005$ . The main effects of apparel web shop and of environmental self-identity were not significant,  $b = -0.20$ ,  $se = 0.15$ ,  $t(83) = -1.38$ ,  $p = .173$ , and  $b = 0.02$ ,  $se = 0.12$ ,  $t(83) = 0.20$ ,  $p = .846$  respectively.

To interpret the interaction effect we standardized the continuous variable environmental self-identity and conducted a spotlight analysis at one standard deviation below (labeled *weak* environmental self-identity) and above (labeled *strong* environmental self-identity) the mean (see Figure 3.2). As predicted, participants with a weak environmental self-identity reported less environmental concern after purchasing environmentally friendly apparel than after purchasing conventional apparel,  $b = -0.63$ ,  $se = 0.22$ ,  $t(83) = -2.84$ ,  $p = .006$ . By contrast, individuals with a strong environmental self-identity were as likely to report environmental concern after purchasing environmentally friendly apparel as after purchasing conventional apparel,  $t(83) = 1.13$ ,  $b = 0.22$ ,  $se = 0.20$ ,  $p = .262$ . We thus replicate the result of Study 3.1 that consumers with a weak environmental self-identity are likely to show licensing effects, whereas consumers with a strong environmental self-identity are unlikely to show licensing effects within the environmental domain. This conceptual

replication strengthens the evidence for our notion that licensing effects are unlikely when the domain is identity relevant.

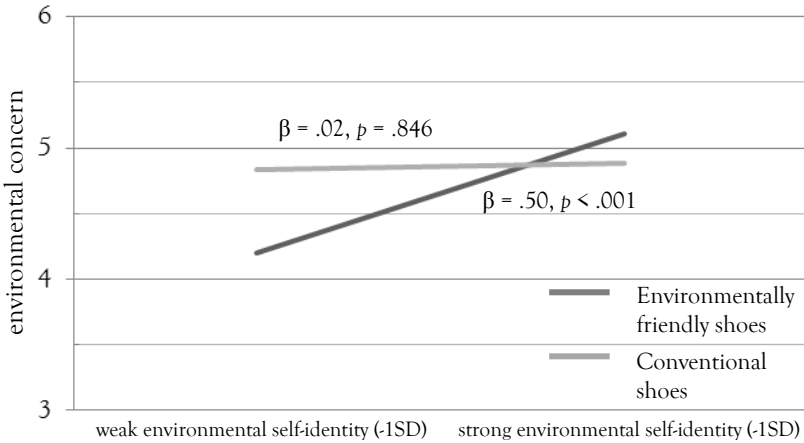


Figure 3.2. Figure showing the interaction effect of purchasing apparel (i.e., organic, conventional) and individual differences in environmental self-identity on environmental concerns (1-7) in Study 3.2. The significance levels of the slopes are estimated by simple slope analyses (Aiken & West, 1991).

### Study 3.3: Excluding an alternative explanation

In Study 3.3 we aimed to find further support for our hypothesis that licensing effects are unlikely in identity related domains. In Studies 3.1 and 3.2 we consistently showed that consumers with a strong environmental self-identity do not show licensing effects within the environmental domain. We reasoned that this is the case because environmentally friendly behavior is identity relevant to consumers with a strong environmental self-identity. Therefore, they are continuously motivated to be environmentally friendly, rather than that they would like to justify their environmentally unfriendly behaviors.

An alternative hypothesis for our results in Studies 3.1 and 3.2 could be that environmentally friendly consumers are “morally better” in general and behave more morally laudable in any moral domain, rather than in the environmental domain specifically. Being environmentally friendly is often

seen as an ethical and morally right thing to do (Bratanova et al., 2012; Schmuck & Schultz, 2002). Since the moral domain is multifaceted (Aquino & Reed, 2002), it may be argued that consumers who behave morally in one domain may also be more likely to behave morally in other domains. Individuals who consume environmentally friendly are indeed perceived to be more ethical and altruistic (i.e., morally better; Mazar & Zhong, 2010). If environmentally friendly consumers are in fact ‘morally better’ individuals our results of Studies 3.1 and 3.2 might be explained by environmentally friendly consumers behaving and being more moral in general, rather than being driven by environmental self-identity specifically. To rule out this possibility, we conducted Study 3.3 as the litmus test for our hypothesis and examined whether consumers with a strong environmental self-identity (who do *not* use environmentally friendly behavior as a justification for subsequent environmentally unfriendly behavior) *do* use environmentally friendly behavior as a justification for subsequent imputable behavior in other morally laudable domains.

To establish this boundary condition, we measured environmental self-identity plus we modified the dependent variable to examine whether consumers with a strong environmental self-identity will show licensing effects in moral domains other than the environmental domain. We investigated this by having participants choose between a hedonic and a utilitarian good (see Khan & Dhar, 2006). Research has shown that utilitarian products are seen as relatively virtuous, morally laudable choices, whereas hedonic products are seen as relative vice, and morally questionable choices (e.g., Dhar & Wertenbroch, 2000; Khan & Dhar, 2006; Kivetz & Simonson, 2002). To enhance validity of our prior results, we again used a different manipulation of environmentally friendly behavior and a different measure for environmental self-identity than in Studies 3.1 and 3.2.

### **Pre-test**

To manipulate whether individuals engaged in environmentally friendly behavior, we modified a manipulation in the domain of consumer licensing by Khan and Dhar (2006). In their manipulation, they asked participants in the licensing condition to imagine having volunteered doing

community services and having to choose between two community services. Participants in the control condition did not complete a task.

To make the task more applicable to our goal and student sample, we asked participants in the licensing condition to imagine having volunteered doing an internship at an environmental charity. Specifically, in the *volunteering* (i.e., licensing) condition participants were asked to imagine that their lecturer had asked for volunteers to help a charity develop a campaign next semester, and that they had signed up to do so. They were given the chance to pick the charity they liked most and in order to facilitate choosing they were given the description of two charities (WWF and Greenpeace). After reading the information, they indicated which environmental charity they preferred for doing the voluntary internship at.

To make the control condition more comparable to the licensing condition, we also asked participants in the control condition to complete a task. Participants in the *rating* (i.e., control) condition were told that the researchers were pre-testing a description of two environmental charities (WWF and Greenpeace) for a study that would run the week after. Participants were asked to read the two descriptions and indicate whether the two descriptions were equally well written on a 7-point scale (cf. Mazar & Zhong, 2010). All participants thus read the exact same information, only the subsequent action differed.

The idea behind this is that in the licensing condition participants feel like they engaged in environmentally friendly behavior as they make an active environmental choice (e.g., choose an environmental charity for doing a voluntary internship). By contrast, in the control condition participants do not feel like they engaged in environmentally friendly behavior as they are merely exposed to information regarding the environment but not make an active environmental choice (e.g., rate the descriptions of two charities). To examine whether individuals in the volunteering (i.e., licensing) condition indeed felt that they engaged in more environmentally friendly behavior than participants in the rating (i.e., control) condition, we conducted a pre-test.

The manipulation was pre-tested on 43 university students ( $M_{age} = 23.58$  years,  $SD_{age} = 1.72$  - 1 missing, 76.7% female). Participants first completed the manipulation and then answered three questions regarding the



extent to which they behaved in an environmentally friendly manner. They answered items like ‘*To what extent do you feel you just did something good for the environment?*’ on a scale from 1 (*not at all*) to 7 (*very much*),  $\alpha = .91$ . As expected, an ANOVA showed that participants in the licensing condition, who chose between the two charities to *volunteer* at, felt they had behaved more environmentally friendly ( $M = 4.75$ ,  $SD = 1.35$ ) than participants in the control condition who merely *rated* the two charities ( $M = 3.39$ ,  $SD = 1.21$ ),  $F(1, 42) = 12.08$ ,  $p < .001$ ,  $\eta_p^2 = .23$ . Our manipulation of behaving in an environmentally friendly manner thus succeeded so we used it in our third and final study.

## Method

**Participants and design.** One hundred twenty-four university students ( $M_{age} = 20.01$  years,  $SD_{age} = 1.58$ , 3 missing, 82.3 % female) completed the present study and several unrelated studies online in exchange for course credit. The participants were randomly assigned to one of two conditions (volunteering for an environmental charity versus rating environmental charities) of a between-subjects design.

**Procedure.** Participants first completed the subtle manipulation of engaging in environmentally friendly behavior as described in the pre-test. In the licensing condition, participants chose one of two environmental charities to *volunteer* at. In the control condition, participants *rated* the how well-written the descriptions of the two environmental charities were.

**Dependent measures.** Following our manipulation, we administered the first dependent measure. Participants were asked to imagine wanting to buy both a combination microwave oven (i.e., utilitarian good) and designer jeans (i.e., hedonic good; based on Khan and Dhar (2006)). Participants imagined going to a shopping mall where a sale was going on, however, when being in the mall they only had enough money for either the combination microwave oven or the designer jeans. Therefore, they had to choose between purchasing the combination microwave oven (virtuous choice) and the designer jeans (vice choice). Their preference was measured on a bipolar slider ranging from 0 (definitely the combination microwave oven) to 100 (definitely the designer jeans).

Next, we administered a second dependent measure in which participants were asked to choose between the environment and economic profit. This measure was taken from previous research on environmental licensing (Sachdeva et al., 2009). Participants completed an environmentally friendly behavior task in which they imagined managing a manufacturing plant that pollutes the air via smokestacks. In order to prevent the release of pollutants they could run filters at monetary costs. Under pressure from environmentalist lobbyist and at the risk of a new law prescribing running the filters 100% at all times, all manufacturing plants agreed with the lobbyists to run the filters 60% of the time. The participants could choose to run filters for any 10% interval between 0% and 100%, with each incremental step costing €0.2 million. The more often the filters would run the better for the environment, but also the higher the financial costs.

At the end of the testing session (i.e., after 20 minutes of completing unrelated and filler studies) we measured environmental self-identity, apparently as part of another unrelated study. We used the Whitmarsh & O'Neill (2010) scale consisting of four items: '*I think of myself as an environmentally-friendly consumer*', '*I think of myself as someone who is very concerned with environmental issues*', '*I would be embarrassed to be seen as having an environmentally friendly lifestyle*' (reversed), and '*I think it is important that my family and friends think of me as someone who is concerned about environmental issues*' on a scale from 1 (*completely disagree*) to 7 (*completely agree*), Cronbach's  $\alpha = .53$ . The reliability of the scale improved substantially when leaving out the reversed scored item, Cronbach's  $\alpha = .77$ . We therefore chose to perform our subsequent analyses on the remaining items, but please note that the results with the four item scale were the same.

## Results and Discussion

**Hedonic versus utilitarian choices.** The choice on the slider between the combination microwave oven (virtuous product; 0) and the designer jeans (vice product; 100) was used in an OLS regression analysis in which we used environmental charity (volunteering, rating), environmental self-identity (a standardized continuous predictor), and their interaction as predictors. The analysis revealed, as expected, a significant main effect of rating versus

volunteering for charity,  $b = 9.95$ ,  $se = 4.58$ ,  $t(120) = 2.17$ ,  $p = .032$ , but the interaction effect between identity and rating versus volunteering for charity was non-significant,  $b = -0.74$ ,  $se = 4.57$ ,  $t(120) = -0.16$ ,  $p = .872$  as was the main effect on environmental self-identity,  $b = -5.77$ ,  $se = 3.25$ ,  $t(120) = -1.77$ ,  $p = .079$ .

The results indicate that participants were more likely to subsequently choose the hedonic option after choosing between two environmental charities to volunteer at than after merely rating information about the same two charities. In other words, consumers are more likely to justify indulgence by choosing hedonic goods after indicating their willingness to behave environmentally friendly, than after performing a neutral act.

Importantly, this effect was not qualified by an interaction effect. Both participants with a weak and a strong environmental self-identity felt licensed to behave hedonically after performing an environmentally friendly act. This suggests that individuals with a strong environmental self-identity are not morally better individuals who do not show licensing effects in any morally laudable domain. Instead, individuals with a strong environmental self-identity do not show licensing effects in the identity relevant domain of environmentally friendly behavior specifically. After all, consumers with a strong environmental self-identity do not show licensing effects in the environmental domain (as shown in Studies 3.1 and 3.2) but they do show licensing effects in morally laudable domains other than the environmental domain (i.e., purchasing vice versus virtue products).

**Environment versus economic profit.** The same OLS regression analysis as on the first dependent measure was run on the second dependent measure: the smokestack filters item. Results from the smokestack filters item, however, presented a somewhat different story: The analysis revealed that the main effect of rating versus volunteering for charity was no longer significant:  $b = -0.26$ ,  $se = 0.28$ ,  $t(120) = -0.91$ ,  $p = .366$ , also the interaction effect was non-significant:  $b = 0.01$ ,  $se = 0.28$ ,  $t(120) = 0.03$ ,  $p = .979$ . The main effect of environmental self-identity was marginally significant  $b = 0.38$ ,  $se = 0.20$ ,  $t(120) = 1.88$ ,  $p = .062$ .

These results appear to indicate that licensing effects wane off as there no longer was an effect of our manipulation on the second dependent measure.

It may thus be the case that an environmentally friendly act ( $t_0$ ) licenses consumers with a weak environmental self-identity to subsequently express less environmental concern ( $t_1$ ), but not to also express fewer environmentally friendly intentions ( $t_2$ ). We will return to this issue in the General Discussion.

In sum, the results of Study 3.3 suggest that individuals with a strong environmental self-identity are not in general morally better individuals who do not show licensing effects in any morally laudable domain. Instead our results suggest that they specifically do not justify morally questionable behaviors in the identity relevant domain of environmentally friendly behavior. In other moral, non-environmental, domains they are as likely to justify morally questionable behaviors as individuals with a weak environmental self-identity. Thereby excluding an important alternative explanation for our results and therefore providing additional evidence for our hypothesis that licensing effects are unlikely in identity relevant domains.

### **General Discussion**

In three studies we tested our hypothesis that licensing effects are unlikely in identity relevant domains. Our studies demonstrated that consumers justify morally questionable behaviors once they have established moral credentials by previously behaving morally laudable, importantly however, this effect was moderated by identity relevance: When the domain was identity relevant, consumers were unlikely to justify morally questionable behaviors. These results are consistent across experiments, and were shown to be robust against the use of different manipulations for environmentally friendly behavior, different dependent variables, and different measures for environmental self-identity.

In Study 3.1, we showed that purchasing environmentally friendly products (i.e., sneakers made of organic cotton) ironically justified subsequent environmentally unfriendly behaviors compared to purchasing conventional products, however, only for consumers with a weak environmental self-identity. By contrast, consumers with a strong environmental self-identity were likely to engage in further environmentally friendly behavior, irrespective of whether they previously purchased an environmentally friendly product. In Study 3.2, we conceptually replicated this finding while measuring environmental self-identity two weeks before the experiment and having participants shop for an

actual outfit. The results showed once more that consumers with a weak environmental self-identity are likely to show licensing effects in the environmental domain whereas consumers with a strong environmental self-identity are unlikely to show licensing effects in the environmental domain.

In Study 3.3, we showed that consumers with a strong environmental self-identity do justify morally questionable behaviors in moral domains other than the environmental domain. This suggests that it is not the case that consumers with an environmental self-identity are “morally better” individuals in general who never show licensing effects. Rather, they specifically do not justify environmentally unfriendly behaviors because these behaviors are relevant to their identity. Together, these studies provide strong support our proposition that although licensing effects emerge after morally laudable consumption they do not emerge in identity relevant domains.

### **Theoretical Contributions and Practical Implications**

The current results fit with recent research that has been trying to disentangle when licensing effects occur and when not (Conway & Peetz, 2012; Gneezy et al., 2012; Young, Chakroff, & Tom, 2012). These studies have, for example, shown that abstract mindsets are less likely to lead to licensing effects than concrete mindsets (Conway & Peetz, 2012) and that costly behaviors are less likely to lead to licensing effects than costless behaviors (Gneezy et al., 2012). It has been suggested that when thinking in an abstract mindset or when performing costly behaviors individuals are more likely to interpret their behavior in terms of their identity (Conway & Peetz, 2012; Gneezy et al., 2012), which would allow us to regard these results as supportive of our theorizing. Therefore, our results extend, support, and unify previous research by revealing identity relevance as the underlying mechanism in expecting licensing effects.

By uncovering identity relevance as an important moderator our results also provide the tools for preventing licensing effects in morally laudable domains. When it concerns, for example, instigating long-lasting environmentally friendly consumption behavior it is important that consumers come to see themselves as environmentally friendly, as then they will be less likely to show environmental licensing effects. Research suggests that merely making consumers consciously aware that they just behaved in an environmentally friendly manner and they thus *are* environmentally friendly

consumers may decrease the likelihood of licensing effects. Young, Chakroff, and Tom (2012) propose that when individuals are made aware that they are “do-gooders” by nature, they are more likely to actually behave good when faced with an opportunity to do so. This is also in line with classic self-perception studies in which individuals see an initial environmentally friendly act as a signal that they are in fact an environmentally friendly person making them more likely to consistently make more environmentally friendly choices (Bem, 1967; Cornelissen et al., 2007). So, after consumers behaved in an environmentally friendly manner (regardless of their primary intentions to behave in this manner) it is important to emphasize the environmentally friendly nature of their actions and to emphasize that this thus means that they *are* an environmentally friendly person. For example, if individuals ride public transportation to work instead of driving simply because there is no parking space, the environmentally friendly character of this behavior plus the implications (i.e., you *are* a environmentally friendly person) could be stressed. In this way individuals will come to see themselves as persons with a environmental self-identity (Cornelissen et al., 2008) and our results show that they will then be less likely to show licensing effects within the environmental domain.

### **Directions for Future Research**

Previous research suggests that the licensing effect may operate proportionally, such that a larger previous moral behavior may lead to a larger subsequent morally questionable behavior (Jordan et al., 2011). In Studies 3.1 and 3.2, we investigated the hypothesis that licensing effects may operate proportionally in the domain of environmentally friendly consumption by highlighting the environmental nature of the product. Our results showed that purchasing a product strongly highlighting its environmental nature did not provide a larger license than a product modestly highlighting its environmental nature. It may be the case, however, that consumers may feel more licensed when purchasing a more costly environmental product (i.e., hybrid Tesla) than purchasing a relatively costless product (i.e., biodegradable detergent) or performing an effortful act (i.e., help cleaning up part of a beach) than a relatively effortless act (i.e., throwing garbage in the bin). This appears to be at

odds, however, with the recent results of Gneezy and colleagues (2012) which suggest that highlighting the costs and effort of the initial moral act could actually decrease the likelihood of licensing effects. Future research is therefore required to provide conclusive evidence on this matter and to unravel whether licensing effects are less or more likely when emphasizing the initial costs of a morally laudable behavior.

Lastly, future research is warranted on the longevity of licensing effects. So far, research on the licensing effect only investigated how a morally laudable behavior may affect a subsequent decision. Given that consumers often make series of choices it is important to investigate whether a morally laudable behavior may also justify ensuing morally questionable decisions. Our research may provide a starting point for this as we included two dependent measures in Study 3.3, representing multiple sequential decisions. In this study, the licensing effect no longer emerged on the second dependent measure. There are multiple explanations for this finding. It could be the case that the second dependent variable was less sensitive than the first dependent variable therefore not uncovering the licensing effect. This appears unlikely, however, as Sachdeva and colleagues (2009) successfully demonstrated the licensing effect on the second dependent variable of Study 3.3 in their study.

An alternative explanation could be that our manipulations were not strong enough to generate effects on the second dependent variable. Previous research has however used filler tasks between similar manipulations of feeling licensed and the dependent variables (Khan & Dhar, 2006; see also e.g., Sachdeva et al., 2009). These studies also demonstrated licensing effects, making this alternative explanation also unlikely. We therefore interpret our finding as that a behavior at  $t_0$  may influence a subsequent decision at  $t_1$ , but no longer affects the ensuing decision at  $t_2$ . It could thus be the case that obtained moral credentials must be re-established in new contexts. Future research could investigate the endurance of the licensing effect in new, ensuing contexts in more detail as it is important to know whether a moral consumer decision may justify subsequent immoral consumer decisions perpetually, especially since consumers often make series of decisions.

## **Conclusions**

Many companies show morally laudable initiatives such as enhancing ethical and environmental concerns by cause related marketing, reusing materials, and producing fair-trade products. Our results highlight that it is important to consider the possibility of licensing effects when trying to instigate this kind of morally laudable consumer behavior as these praiseworthy initiatives may actually backfire. Fortunately, however, we also show that this will not always be the case. Our studies reveal that consumers are unlikely to show these licensing effects when the domain is identity relevant. For example, licensing effects may harm long-lasting environmentally friendly consumption, but not for consumers who regard environmentally friendly behavior as a component of their identity. A possible remedy for the detrimental consequences of licensing effects may therefore be to use communication strategies that enhance the identity relevance of these domains.