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Completed Egoism and Intended Altruism Boost Healthy Food Choices

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We examine self-licensing effects of egoistic and altruistic actions on food choice

Action stage (completed vs. intended) moderated the self-licensing effect

Completed egoistic and intended altruistic actions motivated healthy food choice

These findings open up new perspectives for changing consumers’ food choices

Abstract
Based on the self-licensing literature and goal theory, we expected and found that completed (im)moral actions lead to markedly different food choices (Studies 1 & 2) than intended (im)moral actions (Study 2). In Study 1, people more often chose healthy over unhealthy food options when they recalled a completed egoistic action than when they recalled a completed altruistic action. Study 2 confirmed this finding and furthermore showed that the self-licensing effect in food choices is moderated by the action stage (completed vs. intended) of the moral or immoral action. This article extends the existing self-licensing literature and opens up new perspectives for changing consumers’ food consumption behavior.

Key words: Self-licensing, egoism, altruism, goal theory, action stage, food choices, consistent behavior, inconsistent behavior, consumer behavior

An unhealthy diet is one of the major risk factors for many common diseases like obesity or heart conditions (World Health Organization, 2013). Those severe health problems can be reduced by a more balanced diet. Very often this amounts to increasing vegetable and fruit consumption and to decreasing fat and sugar intake (World Health Organization, 2013; Epstein et al., 2001). However, many people have difficulties following a healthy diet. How can people be motivated to choose healthier food options (e.g., opting for an apple instead of a candy bar)?

Based on self-licensing (Monin & Miller, 2001), i.e., the tendency to compensate for previous moral or immoral actions, the present research first proposes and tests if immoral actions increase healthy food choices and moral actions decrease healthy food choices. A second major goal of this research is to better understand how intended moral actions influence compensatory behaviors. Previous self-licensing literature focused almost exclusively on completed (im)moral actions as a trigger of the self-licensing mechanism. However, it is unclear how intended moral actions affect subsequent moral actions. According to goal theory (e.g., Gollwitzer & Moskowitz, 1996) behavioral intentions motivate consistent
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rather than compensatory behavior in order to reach the goal. This line of research converges with psychological theories that posit that people try to avoid acting inconsistently (e.g., Festinger, 1957; Freedman & Fraser, 1966). Thus, we expect that predicting whether self-licensing will occur depends on whether an action is completed or intended. In other words, whether an (im)moral action is completed or intended should moderate the self-licensing effect.

**Completed Moral Actions Motivate Inconsistent Behavior**

Self-licensing describes the mechanism by which completed moral actions boost people’s moral self-concept, which in turn decreases the tendency to act morally (Merritt, Effron, & Monin, 2010). Conversely, people compensate for completed immoral or egoistic actions by acting more morally or altruistically in the future (Sachdeva, Iliev & Medin, 2009). Both mechanisms seem to be part of a homeostatic moral system that aims to reach a balanced condition. That is, if people feel above a certain level of morality they feel authorized to engage in an immoral action. By contrast, if people transgressed they feel the need to reestablish their moral self-worth by engaging in moral actions. These effects on subsequent behavior have been shown in various moral domains, like racism (Effron, Cameron, & Monin, 2009), sexism (Monin & Miller, 2001), pro-social behavior (Sachdeva et al., 2009), stealing (Mazar & Zhong, 2010), or cheating (Jordan, Mullen & Murnighan, 2011). Self-licensing occurs not only when the initial and subsequent actions happen within the same moral domain (e.g., racial discrimination; Effron et al., 2009) but also when the domains are different (e.g., altruistic behavior and pro-environmental behavior; Sachdeva et al., 2009). This illustrates that a person’s actions are interdependent rather than independent; current actions depend on past decisions, even when the actions do not take place within the same moral domain.

**Morality and Consumer Behavior**
Morality and self-licensing are also relevant in the context of everyday consumption choices. On the one hand, many consumer decisions have moral implications. For instance, it is immoral to spend money on products that are not necessary (i.e., hedonic goods) since the spent amount could be given to people in need (Singer, 1972). Another finding that emphasizes the moral relevance of consumption is that buying luxury goods is associated with feelings of guilt (Dahl, Honea, & Manchanda, 2003). On the other hand, moral and immoral behaviors can also influence subsequent consumer choices. For instance, acting altruistically in a first task increases the probability of choosing a hedonic over a utilitarian good in a second task (Khan & Dhar, 2006).

Related to the decision between a utilitarian and a hedonic product is the decision between a healthy (apple) and an unhealthy food option (candy bar). This assumption is based on the conceptual and experiential similarity between the two dichotomies utilitarian vs. hedonic and healthy vs. unhealthy products. Specifically, unhealthy food options are often perceived as more tasty and more enjoyable (i.e., more hedonic) than healthy food options (Raghunathan, Naylor, & Hoyer, 2006). These findings seem to originate from the intuition or lay belief that tastiness and healthiness of food are inversely related (Raghunathan et al., 2006). Thus, we expect that the self-licensing effect found with hedonic and utilitarian products also applies to unhealthy and healthy food options.

**Morality and Food Choices**

Like consumer choices in general, food choices in particular are also tinged by morality because each individual can be held morally accountable for a healthy lifestyle (Brown, 2013). Research on consumption stereotypes furthermore suggests that people judge others based on what and how much they eat (for a review, see Vartanian, Herman, & Polivy, 2007). Importantly, these judgments also include how moral other people are perceived to be. For instance, people who eat non-fattening foods are rated as more moral than people who eat...
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fattening foods (Stein & Nemeroff, 1995); or oatmeal eaters are perceived as more moral than pie eaters (Oakes & Slotterback, 2004-2005). The link between morality and food choices becomes even more apparent when considering intra-individual behavior. Specifically, recent findings suggest that self-licensing also applies to food choices. For instance, consumers increase their amount of hedonic food intake after an effortful task (de Witt Huberts, Evers, & de Ridder, 2012) and counterfactual sins (i.e., foregone indulgence) license future indulgence (Effron, Monin, & Miller, 2013). Similarly, prior shopping restraint increased the probability of choosing an indulgent food option (Mukhopadhyay & Johar, 2009). In contrast to these studies on self-licensing, our research focuses on how consumers can be motivated to choose healthy over unhealthy food options. First, we expect that based on self-licensing completed immoral actions lead to inconsistent food choices, i.e., completed egoistic actions should lead to a higher rate of healthy food choices than completed altruistic actions. Second, we investigate circumstances (completed vs. intended behavior) under which moral behavior motivates consistent healthy food choices.

Inconsistent versus Consistent Behavior

From a societal point of view the consequences of inconsistent behavior (i.e., self-licensing) can be problematic. For instance, people are more likely to steal after purchasing green products compared to purchasing conventional products (Mazar & Zhong, 2010). Thus, it would be more desirable if people acted in a morally consistent way, e.g., if altruistic behaviors would subsequently motivate people to act morally. Consistent moral (but not immoral) actions would represent more of a win-win situation for a society than inconsistent actions, e.g., if altruistic actions are followed by healthy food choices and not unhealthy food choices.

In contrast to the self-licensing literature, many psychological theories suggest that people prefer to act consistently and avoid acting inconsistently, as it is perceived as
uncomfortable (Festinger, 1957). The classic foot-in-the-door effect (Freedman & Fraser, 1966), for example, demonstrates that people are more likely to perform a helping behavior when they are previously asked for a small helpful act. Thus, an important question concerns the circumstances under which people license past behavior and when they act consistently (e.g., being primed with a moral goal and choosing healthy food). A few studies have recently identified possible moderators for the licensing effect and showed circumstances under which people act consistently or inconsistently with previous actions: Moral priming vs. moral behavior (Mazar & Zhong, 2010), concrete vs. abstract construal level (Conway & Peetz, 2012), low vs. high costs (Gneezy et al., 2012) and level of attitudes (Effron, Cameron & Monin, 2009).

Another potential moderator is the action stage of (im)moral behavior: Completed vs. intended actions. Whereas the self-licensing mechanism is based on completed actions and motivates inconsistent behavior, goal theory (Gollwitzer & Moskowitz, 1996) focuses on intended actions and suggests that people act consistently rather than inconsistently with previous actions. For example, the goal of eating healthy food today should lead people to act consistently with regard to this behavioral intention. Thus, we expect that action stage (completed vs. intended) of the initial moral or immoral action is relevant to predicting whether people act consistently or inconsistently with the initial action.

**Intended Moral Actions Motivate Consistent Behavior**

Self-licensing occurs because one’s moral behavioral history allows acting in a morally problematic way (Merritt, Effron, & Monin, 2010). In other words, previous moral behavior endows people with a license to follow selfish impulses and “to take an action without fear of discrediting themselves” (Miller & Effron, 2010, p. 116).
It is an open question if not yet realized moral behavioral intentions also license problematic actions in the present (i.e., unhealthy food choices). Self-licensing occurs when people have shown in the past that they are altruistic or egoistic, i.e., the altruistic or egoistic action has been completed. For example, people accumulate a surplus of “moral currency” when they acted in an altruistic way in their past (Sachdeva et al., 2009) and this in turn licenses them to choose unhealthy food options. In contrast, simply forming a behavioral intention to act altruistically in the future should not license the choice of unhealthy food options. Forming a behavioral intention to act morally or do good in the future should not provide enough evidence for one’s morality to license unhealthy food choices in the present. In this case, the intention has not been realized and people have not yet proven that they are moral. Thus, the surplus of “moral currency,” to continue the metaphor, has not yet accumulated and self-licensing should not occur.

There are important theoretical reasons suggesting that moral behavioral intentions should motivate consistent behavior. According to goal theory (Gollwitzer, 1990, 1993; Gollwitzer & Moskowitz, 1996) and the theory of planned behavior (Ajzen, 1985), moral behavioral intentions should motivate people to act consistently with their intentions. The result of forming a moral behavioral intention is that people are committed to realizing the moral goal (Gollwitzer, 1999; Gollwitzer & Moskowitz, 1996). These goals draw attention to relevant environmental information and motivate consistent behavior until the goal is fulfilled (Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001). That is, once a moral goal is planned, people can initiate the appropriate behaviors when a relevant situation emerges.

Activation of goals and cognitive procedures in an initial task can have priming effects on a subsequent and unrelated task (Chartrand & Bargh, 1996). Such priming effects of goal activation in an initial task occur when the goal can be applied in the subsequent task (Gollwitzer, Heckhausen, & Steller, 1990). Chen, Shechter, & Chaiken (1996), for instance,
showed that imagining a situation in which one is concerned either with making a good impression or an accurate situational judgment has an impact on adaptation of attitudes. Those who were in the accuracy condition were more in line with the opinion of a fictitious other participant than those in the impression condition. Thus, we expect that activating the goal of moral or immoral behavior should subsequently have an influence on preferences for healthy (i.e., moral) vs. unhealthy (i.e., immoral) food options.

Overview of Experiments

We conducted two experiments to test our hypotheses. In Study 1 we tested the hypothesis that recalling an altruistic action licenses people to choose unhealthy food options. In contrast, people who recall an egoistic action should compensate for this action by opting for a more healthy food option. In addition to the self-licensing effect on food choice, we expected the same pattern for willingness to pay (WTP) for healthy and unhealthy food options: Recalling an altruistic action should increase the WTP for unhealthy food options and recalling an egoistic action should increase the WTP for healthy food options.

In Study 2 we examined action stage (completed vs. intended) as a moderator of the self-licensing effect. In addition to the past conditions of Study 1, we asked people to form a behavioral intention for an altruistic (i.e., moral) or egoistic (i.e., immoral) action they plan to carry out in the future. Establishing a behavioral intention should lead to consistent behavior. Specifically, we expected that forming an altruistic intention leads to a preference for healthy food options. Conversely, forming an egoistic intention leads to a preference for unhealthy food options.

Study 1

Method
Participants and Design. Sixty-two participants (32 females, \(M_{\text{age}} = 23.98, SD_{\text{age}} = 3.51\)) were recruited on a University campus. As compensation for their time, each participant received 4 Swiss Francs (approx. $4) and could in addition take either an apple or a candy bar. Eleven participants were aware of the hypotheses and were therefore excluded from the analysis. The experiment employed a 2 (morality: altruistic essay vs. egoistic essay) by 2 (food options: healthy vs. unhealthy) mixed-factorial design. The morality conditions were manipulated between subjects and the food option conditions within subjects.

Material.

Morality. Participants were instructed to recall either an altruistic or an egoistic action they carried out in the past (see Appendix). Participants then had 5 to 10 minutes to write a short essay on this recalled action (see Sachdeva et al., 2009; Jordan et al., 2011). To facilitate their writing task, we provided participants with a list of four adjectives that referred to either egoism (i.e., disloyal, greedy, mean, selfish) or altruism (i.e., caring, generous, fair, kind).

Food Options. In a pretest, participants evaluated 42 food options with regard to their healthiness (1 = very unhealthy, 7 = very healthy). Based on these results, we formed four pairs of food and beverage choices, each pair consisting of a healthy and an unhealthy alternative (e.g., mineral water vs. Coke). The four healthy food options were perceived as more healthy \((M = 6.02, SD = 0.45)\) than the four unhealthy food options \((M = 1.72, SD = 0.67)\), \(t(101) = 52.07, p < .001, d = 10.36\).

Manipulation Check. Two coders, blind to conditions and hypotheses, rated the essays with regard to their level of altruism or egoism (7-point bipolar scale: -3 = “very egoistic”, +3 = “very altruistic”; see Jordan, Mullen & Murnighan, 2011). Interrater reliability was high (Intraclass correlation coefficient [ICC] = .93). The ratings of the two coders were averaged to evaluate if the manipulation was successful.
**Food Choice.** Participants chose four times between a healthy and an unhealthy food option: Apple vs. candy bar, mineral water vs. Coke, vegetable dip vs. chips, cookies vs. wheat crackers. Each choice was coded as 1 (healthy food option) or 0 (unhealthy food option). Then the four choices were averaged (0 = no healthy food options chosen, 1 = only healthy food options chosen).

**WTP.** Besides food choice, we used WTP as a second measure of participants’ preferences. WTP is a subjective measure defined by the maximum price a consumer is willing to pay for a product and determined by the subjective value a person assigns to it (Simonson & Drolet, 2004). WTP measures buying behavior that can be interpreted as actual behavior (de Pelsmacker, Driesen, & Rayp, 2005). Additionally, knowing consumers’ WTP is fundamental when estimating the demand for a product (Wertenbroch & Skiera, 2002). Thus, it is an important indicator of consumers’ preferences.

After participants had selected the products, they were asked to indicate their WTP for all eight food options they had seen before. WTP was measured with a 15-point scale, where the middle of the scale was represented by the market price. At the low end of the scale (1) the price was 70% below the market price and at the high end of the scale (15) the price was 70% above the market price (i.e., each scale point represented a change of +/-10% relative to the market price). WTP for each food category (healthy and unhealthy) was averaged.

**Procedure**

Participants were randomly assigned to the altruism condition or the egoism condition. After writing about either an altruistic or egoistic action, they decided four times between a healthy and an unhealthy food option. Participants were informed that they would receive one of the four products they had chosen at the end of the experiment. They were not aware which choice would be relevant. Thereafter participants indicated their WTP for all eight products.
(four unhealthy and four healthy food products). At the end of the experiment they all received either an apple or a candy bar (based on their choice during the experiment) and were debriefed.

**Results**

**Manipulation Check**

The manipulation was successful. Coders rated the essays in the altruism condition as more altruistic ($M = 1.77, SD = 0.67$) than the essays in the egoism condition ($M = -1.42, SD = 0.77$), $t(60) = 17.41, p < .001, d = 4.50$.

**Food Choices**

In line with the hypothesis, participants in the egoism condition chose the healthy food options more often ($M = 0.57, SD = 0.26$) than participants in the altruism condition ($M = 0.43, SD = 0.23$), $t(60) = 2.19, p = .033, d = 0.57$. Thus, this result supports the idea that the activation of an altruistic or egoistic self-concept influences what people choose to eat.

**Willingness to Pay**

In addition to the dichotomous choice between healthy and unhealthy alternatives, we elicited individual product preferences by asking what participants were willing to pay for the different products. The dependent variable WTP was analyzed in a 2 (morality: altruistic essay vs. egoistic essay) by 2 (food options: healthy vs. unhealthy) mixed-factorial ANOVA. The results depicted in Figure 1 are in line with our hypothesis. As expected, we found an interaction between morality conditions and food options, $F(1,60) = 5.21, p = .026, \eta^2 = .08$.

Insert Figure 1 about here
Specifically, participants who wrote about an egoistic action were marginally willing to pay more for healthy ($M = 8.88, SD = 2.49$) than for unhealthy food options ($M = 8.17, SD = 1.87$), $t(29) = 1.74, p = .092, d = 0.32$. Conversely, participants who wrote about an altruistic action were not willing to pay more for unhealthy ($M = 8.52, SD = 1.91$) than for healthy food options ($M = 8.09, SD = 2.08$), $t(31) = 1.45, p = .158, d = 0.25$. However, the direction of this trend is in line with the hypothesis.

Results did not reveal a significant main effect of either the essay condition, $F(1, 60) = 0.22, p = .640, \eta^2 = .004$, or food category, $F(1, 60) = 0.31, p = .583, \eta^2 = .005$. Thus, the effect of the recalled action (altruistic or egoistic) on WTP depends on whether food options are healthy or unhealthy.

**Discussion**

In this study, we found that thinking about one’s past moral or immoral actions has consequences on how people make decisions about what they want to eat and drink. Recalling an egoistic action motivated people more often to choose healthy food options than recalling an altruistic action. These patterns mirror the licensing and compensating effects known from the other moral domains (e.g., Effron, Cameron, & Monin, 2009; Monin & Miller, 2001; Sachdeva et al., 2009; Mazar & Zhong, 2010; Jordan, Mullen & Murnighan, 2011) and are in line with recent findings on self-licensing effects shown in the food domain (Mukhopadhyay & Johar, 2009; de Witt Huberts et al., 2012; Effron et al., 2013). Consistent with the choice pattern, participants in the egoistic condition were marginally willing to pay more for healthy than unhealthy food options. The altruistic condition elicited the opposite trend. In sum, activating a less favorable self-concept has the positive consequence that people choose a more healthy diet.
Importantly, this study focused on the self-licensing effect of completed (im)moral actions on food preferences. That is, recalled completed (im)moral actions motivated inconsistent subsequent food preferences. Compared to completed actions, intended actions should not induce inconsistent food preferences. For example, intending to volunteer in the future, as compared to having volunteered in the past, should not lead to unhealthy food choices. Instead, intended moral behavior should motivate consistent healthy food choices. We examine this hypothesis in Study 2.

**Study 2**

In the next study we aim to establish that the self-licensing effect only occurs when people recall completed moral or immoral behavior. People shouldn’t display compensatory food preferences based on intended (im)moral behavior. Specifically, we test the hypothesis that the stage (completed vs. intended) of an initial moral or immoral action moderates the licensing effect on food preferences (choice and WTP).

**Method**

**Participants and Design.** One hundred and six participants (44 female, $M_{age} = 23.61$, $SD_{age} = 8.14$) were recruited on a University campus. As compensation for their time, each participant received 5 Swiss Francs (approx. $5) and could in addition take either an apple or a candy bar. Nine participants were aware of the hypotheses and were therefore excluded from the analysis. The experiment employed a 2 (morality: altruistic essay vs. egoistic essay) by 2 (action stage: completed vs. intended) between-subjects design. The morality and time perspective conditions were manipulated between subjects.

**Material.** In Study 1 we asked participants to write about an egoistic or altruistic action from their past. In Study 2 we added two conditions: Participants were asked to imagine and write about either an intended egoistic or altruistic action that they planned to
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Procedure. We used the same procedure as in Study 1. Participants were randomly assigned to one of the four conditions (completed altruism, intended altruism, completed egoism, intended egoism). Following the writing task they decided four times between a healthy and unhealthy food option. As in Study 1, participants were informed that they would receive one of the four products they had chosen at the end of the experiment. They were not aware which choice would be relevant. Thereafter participants indicated their WTP for all eight products (four unhealthy and four healthy food products). At the end of the experiment they all received either an apple or a candy bar and were debriefed.

Results

Manipulation Check

The manipulation of morality was again successful. Coders rated the essays in the altruism condition as more altruistic ($M = 1.65, SD = 0.94$) than the essays in the egoism condition ($M = -1.70, SD = 0.95$), $t(101) = 17.89, p < .001, d = 3.56$.

Food Choices

Consistent with the hypothesis, we found an interaction between action stage (completed vs. intended) and morality conditions (altruism vs. egoism), $F(1, 102) = 6.00, p = .016, \eta^2 = 0.56$ (see Figure 2).
As expected, planned contrasts revealed that participants who wrote about a completed egoistic action chose healthy food options marginally more often \((M = 0.60, SD = 0.29)\) than participants who wrote about a completed altruistic action \((M = 0.47, SD = 0.28)\), \(t(102) = 1.74, p = .086, d = 0.46\), and conversely, participants who wrote about an intended altruistic action chose healthy food options marginally more often \((M = 0.58, SD = 0.25)\) than participants who wrote about an intended egoistic action \((M = 0.44, SD = 0.25)\), \(t(102) = 1.73, p = .086, d = 0.46\).

**Willingness to Pay**

As in Study 1 we asked participants to indicate their WTP for the eight food options presented in the choice task. In order to illustrate the influence of morality and time perspective on WTP for healthy and unhealthy food options, we calculated the difference between these two WTP measures (WTP healthy food options – WTP unhealthy food options). A positive value represents a higher WTP for healthy than unhealthy food options. A negative value represents a lower WTP for healthy than unhealthy food options.

As expected and in line with participants’ food choices, we found an interaction between morality conditions and time perspective, \(F(1, 102) = 8.45, p = .004, \eta^2 = .08\).
As in Study 1, a planned contrast revealed that participants who wrote about a completed egoistic action were willing to pay more for healthy food options ($M = 1.06, SD = 2.54$) than participants who wrote about a completed altruistic action ($M = -0.53, SD = 1.82$), $t(102) = 2.89, p = .006, d = 0.72$. Conversely, participants who wrote about an intended altruistic action were not willing to pay more for healthy food options ($M = 0.20, SD = 2.27$) than participants who wrote about an intended egoistic action ($M = -0.58, SD = 1.61$), $t(102) = 1.29, p = .199, d = 0.39$. However, as in Study 1 the direction of this trend is in line with the hypothesis.

**Discussion**

In Study 2 we found that action stage (completed vs. intended) moderates the self-licensing effect on food choices. Compared to completed actions (Study 1), food preferences reversed when participants formed moral behavioral intentions for future actions. The intention of performing an altruistic action led participants to choose healthy over unhealthy food options more often than the intention of performing an egoistic action. Consistent with this result, we found the same trend for the WTP measure. These findings may resolve the societal problem that a moral action (i.e., healthy food choice) is more probable when it is preceded by an immoral or egoistic action. Simply shifting the focus of what one has done that is good in the past to what one wants to do that is good in the future creates a win-win situation. In this case moral behavioral intentions go hand in hand with healthy food choices.

Healthy food choices are not only increased when people form the behavioral intention to eat healthily (e.g., Conner, Norman, & Bell, 2002), but also when they form the behavioral intention to act morally.

**General Discussion**
Food choices can help to maintain a healthy life. However, many people fail to resist the daily temptations of unhealthy food offers like chocolate, ice cream or soda. Based on self-licensing and goal theory we examined how action stage (completed vs. intended) moderates healthy food choices. Our results suggest that whether a moral (or immoral) action is completed or intended has markedly different effects on food choices. Across two studies, we showed that completed (im)moral actions motivate inconsistent behavior (Study 1 & 2), whereas intended (im)moral actions motivate consistent behavior (Study 2). Specifically, recalled completed egoistic actions and intended future altruistic actions increased the preference for healthy food options. Conversely, recalling a completed altruistic action or intending a future egoistic action decreased the preference for healthy food options.

Theoretical Contributions

The present research provides evidence that self-licensing only occurs when one thinks of completed moral or immoral actions. People more often chose a healthy food option after recalling an egoistic action compared to an altruistic action. Intended moral or immoral actions did not trigger such a self-licensing effect. It seems that merely intending to do good or bad in the future does not provide enough evidence for one’s level of morality or immorality. Thus, as a consequence, people neither compensate for intended egoistic actions by choosing healthy food options nor do intended altruistic actions license unhealthy food choices. Instead, looking at the intended actions in Study 2, the self-licensing effect reversed. Specifically, we found that action stage moderated the self-licensing effect. It seems to be crucial when the (im)moral action takes place on the time axis, i.e., whether the (im)moral action is completed or intended. These results are in line with goal theory, which posits that people act consistently in order to fulfill their behavior intentions (e.g., Gollwitzer & Moskowitz, 1996; Gollwitzer, 1999).
Furthermore we showed that the self-licensing effect applies to the health domain. These results are in line with recent studies on the influence of the self-licensing effect on food consumption (de Witt Huberts et al., 2012; Effron et al., 2013). However, since people not only decide on how much to eat of indulgent food options but also what to eat, this article focused on the dichotomous choice between healthy and unhealthy food options. In contrast to previous studies that examined either the amount of hedonic food consumed (de Ridder et al., 2012) or the perception of unhealthy food options (Effron et al., 2013; Study 2), this article investigated how people can be nudged towards healthy food choices. We showed that past egoistic actions and future altruistic actions nudge people towards healthy food choices. Additionally, we found that the WTP measure mirrored people’s choices in most cases. For instance, past egoistic behavior not only increased the number of healthy food choices but also the WTP for healthy products.

**Practical Implications**

These findings open new avenues for health promoters and advertisers. Healthy food options seem to require different promotional strategies than unhealthy food options. For example, selling or promoting unhealthy food options would probably be more effective if it were linked to completed moral behavior (e.g., donation). By contrast, selling or promoting healthy food is probably more successful after making completed immoral or problematic behavior salient (e.g., lying) because people then tend to engage in compensatory behavior. Alternatively, and probably more desirable than the latter implication, healthy food consumption may not only be increased by linking it with completed immoral behavior but also with intended moral behavior in the future. Based on our results, intended moral behavior seems to trigger healthy food choices in the present.

Based on our findings, it is important whether an action is completed or intended in order to predict whether self-licensing will occur. Whereas completed actions motivate
inconsistent behavior, intended actions motivate consistent behavior. One interpretation of this finding is that as long as a behavioral intention or goal is active (i.e., the action is not completed), people should act consistently in order to reach the goal. By contrast, once an intention is fulfilled (i.e., the action is completed) self-licensing should occur. To avoid undesirable self-licensing effects, people could thus be better advised to set long-term rather than short-term goals. For instance, we would expect less self-licensing to occur for the goal to eat healthy for the next 12 months than for the goal to eat a healthy lunch.

**Future Research**

We investigated the effect of self-licensing on preference for healthy food options. Healthy food options are often perceived as less tasty than unhealthy food options (Raghunathan et al., 2006). That is, participants might have perceived the healthy food options in our experiments not only as healthier (according to the pretest) but also as less tasty than the unhealthy food options. Therefore, it is possible that participants focused on tastiness rather than healthiness when making their food choices. In order to disentangle the possible conflation of tastiness and healthiness future research could control for tastiness of food options when examining the influence of self-licensing effects on healthy food choices.

In order to preserve a positive self-view (e.g. Baumeister, 1999; Steele, 1988), people might interpret egoistic behavior not as such or they might justify it. Based on our experiments, we cannot determine to what extent people have justified their recalled egoistic behavior. It is an open question how a justification of egoistic behavior would affect compensatory behavior. On the one hand, a justification of egoistic behavior could reduce the cognitive dissonance between the actual egoistic behavior and the aim of a positive self-view, i.e. people would no longer see themselves as egoistic individuals and would preserve their moral self-concept (Mazar, Amir, & Ariely, 2008). This could attenuate self-licensing effects. On the other hand, it is also possible that justifying a behavior triggers the motivation to
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compensate the egoistic behavior with a moral behavior. As a consequence, it is possible that a justification increases compensatory moral behavior.

Similar to intended moral actions, moral primes (e.g., exposure to pictures of benevolent actions), may also induce healthy food choices. Such primes may activate moral goals via environmental cues that motivate consistent behaviors (e.g., Aarts & Dijksterhuis, 2003; Brunner & Siegrist, 2012). For instance, exposure to green products subsequently increased altruistic behavior (Mazar & Zhong, 2010). Similar to this finding, we would expect that moral or altruistic primes increase healthy food choices.

The present research focused on past and future (im)moral actions and their influence on food choices. The distinction between past and future actions can be further extended in two ways. First, past and future actions can either be close to the present (e.g., in 1 hour/1 hour ago) or distant (e.g., in 1 year/1 year ago) and they seem to motivate different moral behaviors. Based on Construal Level Theory (CLT, Trope & Liberman, 2003), people who recalled a recent (concrete) moral action acted more pro-socially (e.g., donated more money) than people who recalled a distant (abstract) moral action (Conway & Peetz, 2012). Applied to healthy food choices, whereas recent moral actions should motivate inconsistent behavior (i.e., unhealthy food choices), distant moral actions should motivate consistent behavior (i.e., healthy food choices). In addition to past moral actions, future studies could also focus on the question of whether recent and distant moral actions in the future have similar effects.

Second, a completed or intended action can either be interpreted as progress towards or commitment to a goal (Fishbach & Dhar, 2005; Zhang, Fishbach, & Dhar, 2007). For instance, eating healthy can either be interpreted as getting closer to a health objective (e.g., losing weight; progress frame) or as caring about one’s health (commitment frame). When framing a goal pursuit as progress, people feel licensed to switch to other goals (e.g., going out). By contrast, a commitment frame leads people to act consistently, e.g., to continue to eat
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1 healthily. Thus, future studies could examine if an egoistic or altruistic action framed as either
2 progress or commitment leads to licensing or compensatory effects. For example, an altruistic
3 action framed as commitment to a moral life should subsequently lead to consistent choices,
4 such as choosing healthy food options.
5
6 In addition to time perspective, health attitude or nutritional knowledge may moderate
7 the self-licensing effect as well. A recent study showed for example that endorsing Obama led
8 to more favorable attitudes toward Whites relative to Blacks, but only when participants had a
9 high level of preexisting prejudice toward Blacks (Effron et al., 2009). Thus, future studies
10 interested in licensing and compensating effects on food choices could examine if health
11 attitudes (e.g., Roineen, Lähteenmäki, & Tuorila, 1999) or nutritional knowledge (e.g.,
12 Wardle, Parmenter, & Waller, 2000) have an influence on the self-licensing effect.
13
14 Conclusion
15
16 In conclusion, the present research indicates that action stage (completed vs. intended)
17 of moral and immoral actions moderates the self-licensing effect in food choices. Both
18 completed egoistic actions and intended altruism actions increased the preference for healthy
19 food options. Additionally, our findings may resolve the problematic implication of self-
20 licensing that healthy eating has to be preceded by immoral behavior. That is, intended moral
21 actions seem to have the same effect on healthy eating. These results open up new
22 possibilities in promotion of healthy eating.
23
24 References
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Appendix

**Completed Altruism and Completed Egoism Conditions (Study 1 and Study 2)**

Please recall a situation in which you have acted altruistic and unselfish [egoism condition: egoistic and selfish]. Try to write down as many details as you can, so another person who reads your essay can put him- or herself in your place. Synonyms for altruistic and unselfish [egoistic and selfish] are: caring, generous, fair, kind [disloyal, greedy, mean, ruthless].
Intended Altruism and Intended Egoism Conditions (Study 2)

Please imagine a situation in the future in which you intend to act altruistic and unselfish [egoism condition: egoistic and selfish]. Try to write down as many details as you can, so another person who reads your essay can put him- or herself in your place. Synonyms for altruistic and unselfish are [egoistic and selfish]: caring, generous, fair, kind [disloyal, greedy, mean, ruthless].

Figure 1. Mean WTP for healthy and unhealthy food options as a function of morality conditions (altruism, egoism).
Figure 2. Percentage of healthy food choices as a function of morality conditions (altruism, egoism) and action stage (completed, intended).
Figure 3. WTP difference (WTP for healthy food options minus WTP for unhealthy food options) as a function of morality conditions (altruism vs. egoism) and time perspective (completed vs. intended).