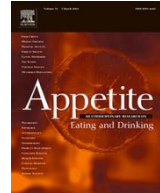


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Completed Egoism and Intended Altruism Boost Healthy Food Choices

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16

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

17

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

18

- Completed egoistic and intended altruistic actions motivated healthy food choice

19

- These findings open up new perspectives for changing consumers' food choices

20

Abstract

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

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

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

18 Based on self-licensing (Monin & Miller, 2001), i.e., the tendency to compensate for
19 previous moral or immoral actions, the present research first proposes and tests if immoral
20 actions increase healthy food choices and moral actions decrease healthy food choices. A
21 second major goal of this research is to better understand how *intended* moral actions
22 influence compensatory behaviors. Previous self-licensing literature focused almost
23 exclusively on *completed* (im)moral actions as a trigger of the self-licensing mechanism.
24 However, it is unclear how *intended* moral actions affect subsequent moral actions. According
25 to goal theory (e.g., Gollwitzer & Moskowitz, 1996) behavioral *intentions* motivate consistent

1 rather than compensatory behavior in order to reach the goal. This line of research converges
2 with psychological theories that posit that people try to avoid acting inconsistently (e.g.,
3 Festinger, 1957; Freedman & Fraser, 1966). Thus, we expect that predicting whether self-
4 licensing will occur depends on whether an action is completed or intended. In other words,
5 whether an (im)moral action is completed or intended should moderate the self-licensing
6 effect.

7 **Completed Moral Actions Motivate Inconsistent Behavior**

8 Self-licensing describes the mechanism by which completed moral actions boost
9 people's moral self-concept, which in turn decreases the tendency to act morally (Merritt,
10 Effron, & Monin, 2010). Conversely, people compensate for completed immoral or egoistic
11 actions by acting more morally or altruistically in the future (Sachdeva, Iliiev & Medin, 2009).
12 Both mechanisms seem to be part of a homeostatic moral system that aims to reach a balanced
13 condition. That is, if people feel above a certain level of morality they feel authorized to
14 engage in an immoral action. By contrast, if people transgressed they feel the need to
15 reestablish their moral self-worth by engaging in moral actions. These effects on subsequent
16 behavior have been shown in various moral domains, like racism (Effron, Cameron, & Monin,
17 2009), sexism (Monin & Miller, 2001), pro-social behavior (Sachdeva et al., 2009), stealing
18 (Mazar & Zhong, 2010), or cheating (Jordan, Mullen & Murnighan, 2011). Self-licensing
19 occurs not only when the initial and subsequent actions happen within the same moral domain
20 (e.g., racial discrimination; Effron et al., 2009) but also when the domains are different (e.g.,
21 altruistic behavior and pro-environmental behavior; Sachdeva et al., 2009). This illustrates
22 that a person's actions are interdependent rather than independent; current actions depend on
23 past decisions, even when the actions do not take place within the same moral domain.

24 **Morality and Consumer Behavior**

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

10 Related to the decision between a utilitarian and a hedonic product is the decision
11 between a healthy (apple) and an unhealthy food option (candy bar). This assumption is based
12 on the conceptual and experiential similarity between the two dichotomies utilitarian vs.
13 hedonic and healthy vs. unhealthy products. Specifically, unhealthy food options are often
14 perceived as more tasty and more enjoyable (i.e., more hedonic) than healthy food options
15 (Raghunathan, Naylor, & Hoyer, 2006). These findings seem to originate from the intuition or
16 lay belief that tastiness and healthiness of food are inversely related (Raghunathan et al.,
17 2006). Thus, we expect that the self-licensing effect found with hedonic and utilitarian
18 products also applies to unhealthy and healthy food options.

19 **Morality and Food Choices**

20 Like consumer choices in general, food choices in particular are also tinged by
21 morality because each individual can be held morally accountable for a healthy lifestyle
22 (Brown, 2013). Research on consumption stereotypes furthermore suggests that people judge
23 others based on what and how much they eat (for a review, see Vartanian, Herman, & Polivy,
24 2007). Importantly, these judgments also include how moral other people are perceived to be.
25 For instance, people who eat non-fattening foods are rated as more moral than people who eat

1 fattening foods (Stein & Nemeroff, 1995); or oatmeal eaters are perceived as more moral than
2 pie eaters (Oakes & Slotterback, 2004-2005). The link between morality and food choices
3 becomes even more apparent when considering intra-individual behavior. Specifically, recent
4 findings suggest that self-licensing also applies to food choices. For instance, consumers
5 increase their amount of hedonic food intake after an effortful task (de Witt Huberts, Evers, &
6 de Ridder, 2012) and counterfactual sins (i.e., foregone indulgence) license future indulgence
7 (Effron, Monin, & Miller, 2013). Similarly, prior shopping restraint increased the probability
8 of choosing an indulgent food option (Mukhopadhyay & Johar, 2009). In contrast to these
9 studies on self-licensing, our research focuses on how consumers can be motivated to choose
10 healthy over unhealthy food options. First, we expect that based on self-licensing completed
11 immoral actions lead to inconsistent food choices, i.e., completed egoistic actions should lead
12 to a higher rate of healthy food choices than completed altruistic actions. Second, we
13 investigate circumstances (completed vs. intended behavior) under which moral behavior
14 motivates consistent healthy food choices.

15 **Inconsistent versus Consistent Behavior**

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

24 In contrast to the self-licensing literature, many psychological theories suggest that
25 people prefer to act consistently and avoid acting inconsistently, as it is perceived as

1 uncomfortable (Festinger, 1957). The classic foot-in-the-door effect (Freedman & Fraser,
2 1966), for example, demonstrates that people are more likely to perform a helping behavior
3 when they are previously asked for a small helpful act. Thus, an important question concerns
4 the circumstances under which people license past behavior and when they act consistently
5 (e.g., being primed with a moral goal and choosing healthy food). A few studies have recently
6 identified possible moderators for the licensing effect and showed circumstances under which
7 people act consistently or inconsistently with previous actions: Moral priming vs. moral
8 behavior (Mazar & Zhong, 2010), concrete vs. abstract construal level (Conway & Peetz,
9 2012), low vs. high costs (Gneezy et al., 2012) and level of attitudes (Effron, Cameron &
10 Monin, 2009).

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

19 **Intended Moral Actions Motivate Consistent Behavior**

20 Self-licensing occurs because one's moral behavioral *history* allows acting in a
21 morally problematic way (Merritt, Effron, & Monin, 2010). In other words, previous moral
22 behavior endows people with a license to follow selfish impulses and "to take an action
23 without fear of discrediting themselves" (Miller & Effron, 2010, p. 116).

1 It is an open question if not yet realized moral behavioral intentions also license
2 problematic actions in the present (i.e., unhealthy food choices). Self-licensing occurs when
3 people have shown in the past that they are altruistic or egoistic, i.e., the altruistic or egoistic
4 action has been completed. For example, people accumulate a surplus of “moral currency”
5 when they acted in an altruistic way in their past (Sachdeva et al., 2009) and this in turn
6 licenses them to choose unhealthy food options. In contrast, simply forming a behavioral
7 intention to act altruistically in the future should not license the choice of unhealthy food
8 options. Forming a behavioral intention to act morally or do good in the future should not
9 provide enough evidence for one’s morality to license unhealthy food choices in the present.
10 In this case, the intention has not been realized and people have not yet proven that they are
11 moral. Thus, the surplus of “moral currency,” to continue the metaphor, has not yet
12 accumulated and self-licensing should not occur.

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

22 Activation of goals and cognitive procedures in an initial task can have priming effects
23 on a subsequent and unrelated task (Chartrand & Bargh, 1996). Such priming effects of goal
24 activation in an initial task occur when the goal can be applied in the subsequent task
25 (Gollwitzer, Heckhausen, & Steller, 1990). Chen, Shechter, & Chaiken (1996), for instance,

1 showed that imagining a situation in which one is concerned either with making a good
2 impression or an accurate situational judgment has an impact on adaptation of attitudes. Those
3 who were in the accuracy condition were more in line with the opinion of a fictitious other
4 participant than those in the impression condition. Thus, we expect that activating the goal of
5 moral or immoral behavior should subsequently have an influence on preferences for healthy
6 (i.e., moral) vs. unhealthy (i.e., immoral) food options.

7 **Overview of Experiments**

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

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

22 **Study 1**

23 **Method**

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

8 **Material.**

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

14 **Food Options.** In a pretest, participants evaluated 42 food options with regard to their
15 healthiness (1 = *very unhealthy*, 7 = *very healthy*). Based on these results, we formed four
16 pairs of food and beverage choices, each pair consisting of a healthy and an unhealthy
17 alternative (e.g., mineral water vs. Coke). The four healthy food options were perceived as
18 more healthy ($M = 6.02$, $SD = 0.45$) than the four unhealthy food options ($M = 1.72$, $SD =$
19 0.67), $t(101) = 52.07$, $p < .001$, $d = 10.36$.

20 **Manipulation Check.** Two coders, blind to conditions and hypotheses, rated the
21 essays with regard to their level of altruism or egoism (7-point bipolar scale: - 3 = “very
22 egoistic”, + 3 = “very altruistic”; see Jordan, Mullen & Murnighan, 2011). Interrater
23 reliability was high (Intraclass correlation coefficient [ICC]= .93). The ratings of the two
24 coders were averaged to evaluate if the manipulation was successful.

1 **Food Choice.** Participants chose four times between a healthy and an unhealthy food
2 option: Apple vs. candy bar, mineral water vs. Coke, vegetable dip vs. chips, cookies vs.
3 wheat crackers. Each choice was coded as 1 (healthy food option) or 0 (unhealthy food
4 option). Then the four choices were averaged (0 = no healthy food options chosen, 1 = only
5 healthy food options chosen).

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

13 After participants had selected the products, they were asked to indicate their WTP for
14 all eight food options they had seen before. WTP was measured with a 15-point scale, where
15 the middle of the scale was represented by the market price. At the low end of the scale (1)
16 the price was 70% below the market price and at the high end of the scale (15) the price was
17 70% above the market price (i.e., each scale point represented a change of +/-10% relative to
18 the market price). WTP for each food category (healthy and unhealthy) was averaged.

19 **Procedure**

20 Participants were randomly assigned to the altruism condition or the egoism condition.
21 After writing about either an altruistic or egoistic action, they decided four times between a
22 healthy and an unhealthy food option. Participants were informed that they would receive one
23 of the four products they had chosen at the end of the experiment. They were not aware which
24 choice would be relevant. Thereafter participants indicated their WTP for all eight products

1 (four unhealthy and four healthy food products). At the end of the experiment they all
2 received either an apple or a candy bar (based on their choice during the experiment) and
3 were debriefed.

4 Results

5 Manipulation Check

6 The manipulation was successful. Coders rated the essays in the altruism condition as
7 more altruistic ($M = 1.77$, $SD = 0.67$) than the essays in the egoism condition ($M = -1.42$, $SD =$
8 0.77), $t(60) = 17.41$, $p < .001$, $d = 4.50$.

9 Food Choices

10 In line with the hypothesis, participants in the egoism condition chose the healthy food
11 options more often ($M = 0.57$, $SD = 0.26$) than participants in the altruism condition ($M =$
12 0.43 , $SD = 0.23$), $t(60) = 2.19$, $p = .033$, $d = 0.57$. Thus, this result supports the idea that the
13 activation of an altruistic or egoistic self-concept influences what people choose to eat.

14 Willingness to Pay

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

21 -----

22 Insert Figure 1 about here

1

2 Specifically, participants who wrote about an egoistic action were marginally willing
3 to pay more for healthy ($M = 8.88$, $SD = 2.49$) than for unhealthy food options ($M = 8.17$, SD
4 $= 1.87$), $t(29) = 1.74$, $p = .092$, $d = 0.32$. Conversely, participants who wrote about an
5 altruistic action were not willing to pay more for unhealthy ($M = 8.52$, $SD = 1.91$) than for
6 healthy food options ($M = 8.09$, $SD = 2.08$), $t(31) = 1.45$, $p = .158$, $d = 0.25$. However, the
7 direction of this trend is in line with the hypothesis.

8 Results did not reveal a significant main effect of either the essay condition, $F(1, 60) =$
9 0.22 , $p = .640$, $\eta^2 = .004$, or food category, $F(1, 60) = 0.31$, $p = .583$, $\eta^2 = .005$. Thus, the
10 effect of the recalled action (altruistic or egoistic) on WTP depends on whether food options
11 are healthy or unhealthy.

12

Discussion

13 In this study, we found that thinking about one's past moral or immoral actions has
14 consequences on how people make decisions about what they want to eat and drink. Recalling
15 an egoistic action motivated people more often to choose healthy food options than recalling
16 an altruistic action. These patterns mirror the licensing and compensating effects known from
17 the other moral domains (e.g., Effron, Cameron, & Monin, 2009; Monin & Miller, 2001;
18 Sachdeva et al., 2009; Mazar & Zhong, 2010; Jordan, Mullen & Murnighan, 2011) and are in
19 line with recent findings on self-licensing effects shown in the food domain (Mukhopadhyay
20 & Johar, 2009; de Witt Huberts et al., 2012; Effron et al., 2013). Consistent with the choice
21 pattern, participants in the egoistic condition were marginally willing to pay more for healthy
22 than unhealthy food options. The altruistic condition elicited the opposite trend. In sum,
23 activating a less favorable self-concept has the positive consequence that people choose a
24 more healthy diet.

1 carry out in the future, i.e., the action has neither been initiated nor completed. Other than the
2 adaptation of the action stage (from completed to intended actions) the instructions were
3 identical to Study 1 (see Appendix). We also used the same dependent measures as in Study 1
4 (food choices, WTP). Again, two coders, blind to conditions and hypotheses, rated the essays
5 with regard to their level of altruism or egoism. Interrater reliability was high (Intraclass
6 correlation coefficient [ICC]= .90). The ratings of the two coders were averaged to evaluate if
7 the manipulation was successful.

8 **Procedure.** We used the same procedure as in Study 1. Participants were randomly
9 assigned to one of the four conditions (completed altruism, intended altruism, completed
10 egoism, intended egoism). Following the writing task they decided four times between a
11 healthy and unhealthy food option. As in Study 1, participants were informed that they would
12 receive one of the four products they had chosen at the end of the experiment. They were not
13 aware which choice would be relevant. Thereafter participants indicated their WTP for all
14 eight products (four unhealthy and four healthy food products). At the end of the experiment
15 they all received either an apple or a candy bar and were debriefed.

16 Results

17 Manipulation Check

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

21 Food Choices

22 Consistent with the hypothesis, we found an interaction between action stage
23 (completed vs. intended) and morality conditions (altruism vs. egoism), $F(1, 102) = 6.00$, $p =$
24 $.016$, $\eta^2 = 0.56$ (see Figure 2).

1 -----

2 Insert Figure 2 about here

3 -----

4 As expected, planned contrasts revealed that participants who wrote about a completed
5 egoistic action chose healthy food options marginally more often ($M = 0.60$, $SD = 0.29$) than
6 participants who wrote about a completed altruistic action ($M = 0.47$, $SD = 0.28$), $t(102) =$
7 1.74 , $p = .086$, $d = 0.46$, and conversely, participants who wrote about an intended altruistic
8 action chose healthy food options marginally more often ($M = 0.58$, $SD = 0.25$) than
9 participants who wrote about an intended egoistic action ($M = 0.44$, $SD = 0.25$), $t(102) = 1.73$,
10 $p = .086$, $d = 0.46$.

11 **Willingness to Pay**

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

18 As expected and in line with participants' food choices, we found an interaction
19 between morality conditions and time perspective, $F(1, 102) = 8.45$, $p = .004$, $eta^2 = .08$.

20 -----

21 Insert Figure 3 about here

22 -----

1 As in Study 1, a planned contrast revealed that participants who wrote about a
2 completed egoistic action were willing to pay more for healthy food options ($M = 1.06$, $SD =$
3 2.54) than participants who wrote about a completed altruistic action ($M = -.53$, $SD = 1.82$),
4 $t(102) = 2.89$, $p = .006$, $d = 0.72$. Conversely, participants who wrote about an intended
5 altruistic action were not willing to pay more for healthy food options ($M = 0.20$, $SD = 2.27$)
6 than participants who wrote about an intended egoistic action ($M = -.58$, $SD = 1.61$), $t(102) =$
7 1.29 , $p = .199$, $d = 0.39$. However, as in Study 1 the direction of this trend is in line with the
8 hypothesis.

9 Discussion

10 In Study 2 we found that action stage (completed vs. intended) moderates the self-
11 licensing effect on food choices. Compared to completed actions (Study 1), food preferences
12 reversed when participants formed moral behavioral intentions for future actions. The
13 intention of performing an altruistic action led participants to choose healthy over unhealthy
14 food options more often than the intention of performing an egoistic action. Consistent with
15 this result, we found the same trend for the WTP measure. These findings may resolve the
16 societal problem that a moral action (i.e., healthy food choice) is more probable when it is
17 preceded by an immoral or egoistic action. Simply shifting the focus of what one has done
18 that is good in the past to what one wants to do that is good in the future creates a win-win
19 situation. In this case moral behavioral intentions go hand in hand with healthy food choices.
20 Healthy food choices are not only increased when people form the behavioral intention to eat
21 healthily (e.g., Conner, Norman, & Bell, 2002), but also when they form the behavioral
22 intention to act morally.

23 General Discussion

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

11 **Theoretical Contributions**

12 The present research provides evidence that self-licensing only occurs when one thinks
13 of *completed* moral or immoral actions. People more often chose a healthy food option after
14 recalling an egoistic action compared to an altruistic action. Intended moral or immoral
15 actions did not trigger such a self-licensing effect. It seems that merely intending to do good
16 or bad in the future does not provide enough evidence for one's level of morality or
17 immorality. Thus, as a consequence, people neither compensate for intended egoistic actions
18 by choosing healthy food options nor do intended altruistic actions license unhealthy food
19 choices. Instead, looking at the intended actions in Study 2, the self-licensing effect reversed.
20 Specifically, we found that action stage moderated the self-licensing effect. It seems to be
21 crucial when the (im)moral action takes place on the time axis, i.e., whether the (im)moral
22 action is completed or intended. These results are in line with goal theory, which posits that
23 people act consistently in order to fulfill their behavior intentions (e.g., Gollwitzer &
24 Moskowitz, 1996; Gollwitzer, 1999).

1 Furthermore we showed that the self-licensing effect applies to the health domain.
2 These results are in line with recent studies on the influence of the self-licensing effect on
3 food consumption (de Witt Huberts et al., 2012; Effron et al., 2013). However, since people
4 not only decide on how much to eat of indulgent food options but also what to eat, this article
5 focused on the dichotomous choice between healthy and unhealthy food options. In contrast
6 to previous studies that examined either the amount of hedonic food consumed (de Ridder et
7 al., 2012) or the perception of unhealthy food options (Efron et al., 2013; Study 2), this
8 article investigated how people can be nudged towards healthy food choices. We showed that
9 past egoistic actions and future altruistic actions nudge people towards healthy food choices.
10 Additionally, we found that the WTP measure mirrored people's choices in most cases. For
11 instance, past egoistic behavior not only increased the number of healthy food choices but
12 also the WTP for healthy products.

13 **Practical Implications**

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

24 Based on our findings, it is important whether an action is completed or intended in
25 order to predict whether self-licensing will occur. Whereas completed actions motivate

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

8 **Future Research**

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

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

1 compensate the egoistic behavior with a moral behavior. As a consequence, it is possible that
2 a justification increases compensatory moral behavior.

3 Similar to intended moral actions, moral primes (e.g., exposure to pictures of
4 benevolent actions), may also induce healthy food choices. Such primes may activate moral
5 goals via environmental cues that motivate consistent behaviors (e.g., Aarts & Dijksterhuis,
6 2003; Brunner & Siegrist, 2012). For instance, exposure to green products subsequently
7 increased altruistic behavior (Mazar & Zhong, 2010). Similar to this finding, we would expect
8 that moral or altruistic primes increase healthy food choices.

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

20 Second, a completed or intended action can either be interpreted as progress towards
21 or commitment to a goal (Fishbach & Dhar, 2005; Zhang, Fishbach, & Dhar, 2007). For
22 instance, eating healthy can either be interpreted as getting closer to a health objective (e.g.,
23 losing weight; progress frame) or as caring about one's health (commitment frame). When
24 framing a goal pursuit as progress, people feel licensed to switch to other goals (e.g., going
25 out). By contrast, a commitment frame leads people to act consistently, e.g., to continue to eat

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 In addition to time perspective, health attitude or nutritional knowledge may moderate
6 the self-licensing effect as well. A recent study showed for example that endorsing Obama led
7 to more favorable attitudes toward Whites relative to Blacks, but only when participants had a
8 high level of preexisting prejudice toward Blacks (Effron et al., 2009). Thus, future studies
9 interested in licensing and compensating effects on food choices could examine if health
10 attitudes (e.g., Roininen, Lähteenmäki, & Tuorila, 1999) or nutritional knowledge (e.g.,
11 Wardle, Parmenter, & Waller, 2000) have an influence on the self-licensing effect.

12 **Conclusion**

13 In conclusion, the present research indicates that action stage (completed vs. intended)
14 of moral and immoral actions moderates the self-licensing effect in food choices. Both
15 completed egoistic actions and intended altruism actions increased the preference for healthy
16 food options. Additionally, our findings may resolve the problematic implication of self-
17 licensing that healthy eating has to be preceded by immoral behavior. That is, intended moral
18 actions seem to have the same effect on healthy eating. These results open up new
19 possibilities in promotion of healthy eating.

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17 Appendix

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

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

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

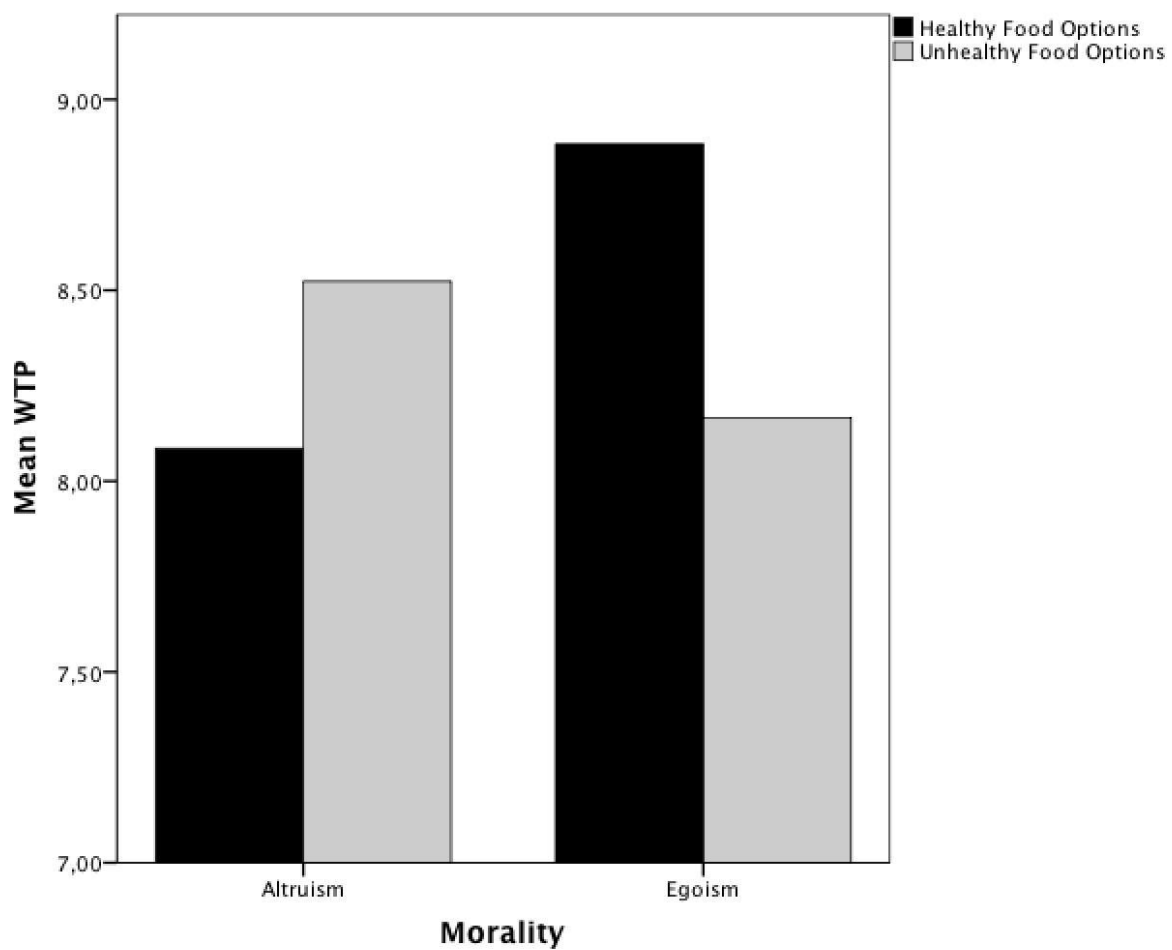
2 Please imagine a situation in the future in which you intend to act **altruistic and unselfish**

3 [egoism condition: **egoistic and selfish**]. Try to write down as many details as you can, so

4 another person who reads your essay can put him- or herself in your place. Synonyms for

5 altruistic and unselfish are [egoistic and selfish]: caring, generous, fair, kind [disloyal, greedy,

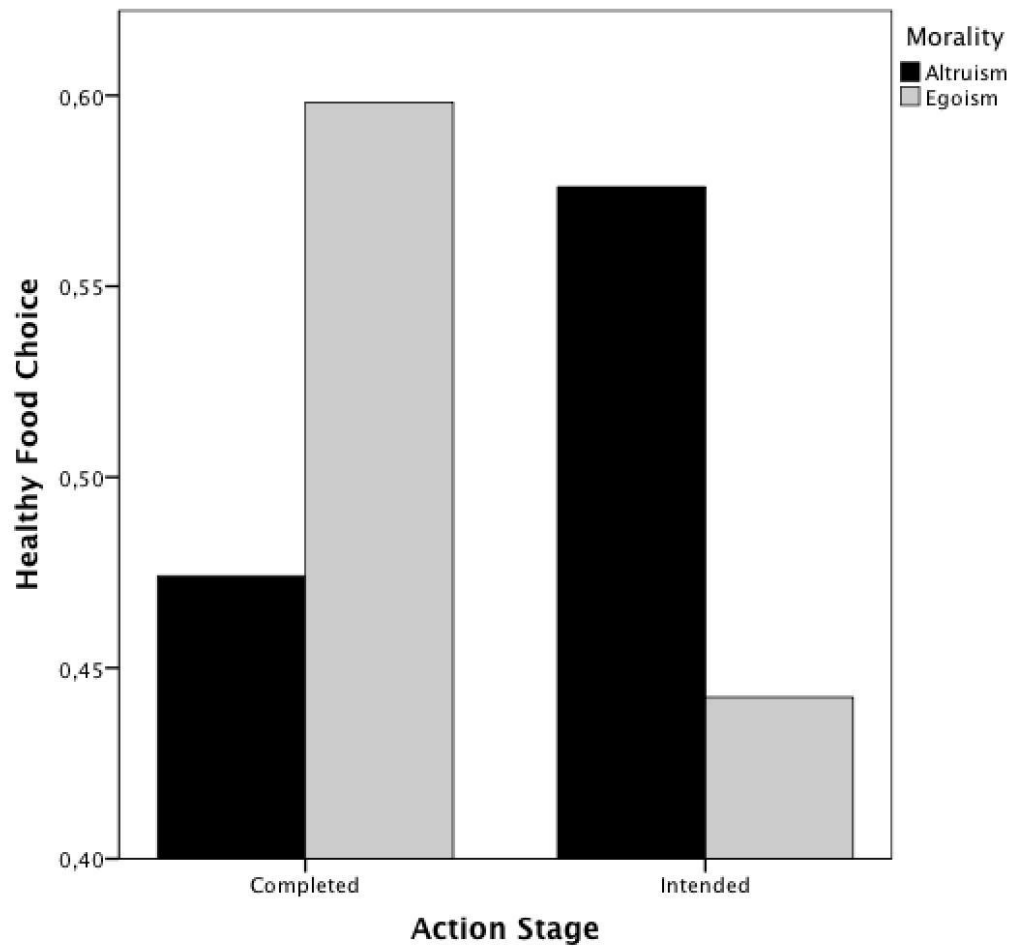
6 mean, ruthless].



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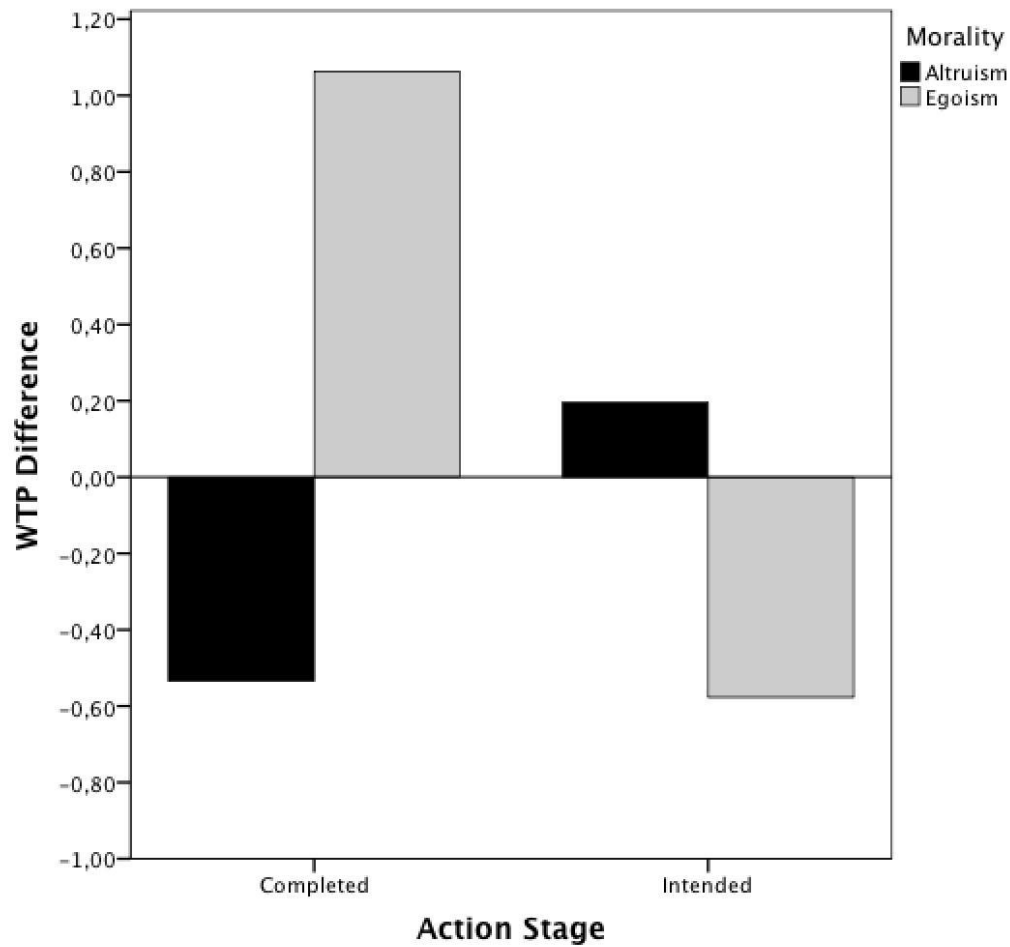
9 *Figure 1.* Mean WTP for healthy and unhealthy food options as a function of morality

10 conditions (altruism, egoism).



1
2

3 *Figure 2.* Percentage of healthy food choices as a function of morality conditions (altruism,
4 egoism) and action stage (completed, intended).



1
2

3 *Figure 3.* WTP difference (WTP for healthy food options minus WTP for unhealthy food
4 options) as a function of morality conditions (altruism vs. egoism) and time perspective
5 (completed vs. intended).