SUBJECTIVE MORALITY – EMPIRICAL STUDIES ON HOW PEOPLE BALANCE THEIR OWN INTERESTS WITH THE INTERESTS OF OTHERS AND EXPERIENCE MORAL MEANING

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vorgelegt von

Diplompsychologe Moritz Susewind

aus

Arnsberg

Referent: Prof. Dr. Erik Hölzl, Universität zu Köln

Co-Referent: Prof. Dr. Torsten Biemann, Universität zu Köln

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PREFACE AND ACKNOWLEDGEMENTS

The following dissertation resulted from my work at the Department of Economic and Social Psychology in Cologne. At this point I would like to emphasize a thought that is important to keep in mind when reading my dissertation: people are as good as their environment helps them to be. This thought has been expressed by different scholars such as Lev Vygotsky, Johann Wolfgang von Goethe or Gerald Hüther. I very much like the idea behind this thought, because it reiterates that no work is done alone and people's actual true potential develops in social contexts.

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INTRODUCTION

In every-day life people are confronted with a vast range of decisions that potentially involve aspects of right and wrong. If a senior citizen enters the bus, one has to decide whether to offer their seat or not. If a flight ticket within Germany is less expensive than a train ride, one has to decide whether to consider the external costs for the environment or not. If a business opportunity offers high personal revenue but entails the loss of many jobs, one has to decide whether to engage in it or not. Besides the diversity of these situations, one common aspect is that people have to integrate their own personal interests with the interests of others or society as whole. Essentially, they have to navigate between different motives or goals. In order to do that and finally arrive at a decision, people do not just rely on normative rules or cold reflection of the mere facts – they also rely on their subjective experience. One question addressed in this dissertation is how people experience their past moral behavior and how this influences their future moral decisions. In addition, I researched how people conceive moral meaning with the help of metaphors. Together, this research contributes towards understanding how subjective experiences influence moral judgment and decision making.

Traditionally, the psychology of moral behavior and decision making has been researched as a matter of rational thinking and careful reasoning (Haidt, 2001, 2008). Thus, classic approaches to explain moral decision making in the psychological literature have relied heavily on cognitive reasoning and reflection. As an example, Kohlberg (Kohlberg, 1963; Kohlberg & Hersh, 1977) proposed a cognitive-developmental model of morality that includes several stages of moral development. These stages are tied to a person's cognitive development, which basically implies that moral decisions are to a large extent dependent on cognitive resources.

Also, Kohlberg's main approach to research moral decision making via the analysis of moral dilemmata was quite reasoning oriented. Despite the fact that Kohlberg's work was very influential, it has been criticized for excluding less reasoning oriented and more subjective factors that influence moral decision making (Gibbs & Schnell, 1985; Haidt, 2001), i.e. factors that are based on the experience of the individual rather than a calculation of mere facts. Within the last 20 years, these subjective factors have gained more attention in the literature (Chugh, Bazerman, & Banaji, 2005; Haidt, 2001, 2008). Different strains of research include work on moral emotions (Haidt, 2001, 2003b; Rozin, Lowery, Imada, & Haidt, 1999; Tangney, Stuewig, & Mashek, 2007), the influence of past moral behavior on future moral behavior (Effron & Monin, 2010; Jordan, Mullen, & Murnighan, 2011; Monin & Miller, 2001; Zhong, Liljenquist, & Cain, 2009), lay theories (Nemeroff & Rozin, 1994; Rozin, Millman, & Nemeroff, 1986) and conceptual metaphors related to morality (Lee & Schwarz, 2011; Sanna, Chang, Miceli, & Lundberg, 2011; Sherman & Clore, 2009; Zhong & Liljenquist, 2006). Together, these different strains of research contribute to a broader and more holistic picture of moral decision making, complementing other more classic approaches that rely on deliberate reasoning and reflection.

In the present dissertation, some of these subjective factors and their influences on moral decision making and judgment were investigated. Specifically, in articles 1 and 2, situational factors influencing the perspective that people apply when looking at their own past moral behavior were researched. The research showed that the perspective from which people look at their past moral behavior predicted their moral decision making in the future. In article 3, lay-theories and conceptual metaphors related to morality were investigated. The research showed that the concept of weight was metaphorically related to morality and shaped people's judgment of and behavior towards objects with a moral meaning. Together, the studies of this dissertation

contribute towards explaining people's every-day moral decision making. Additionally, they advance the literature by integrating and applying theories from different backgrounds to the moral domain.

The term *moral behavior* is used in the psychological literature in a rather broad sense. It is often used interchangeably with altruism, ethicality or yet other terms (Jordan, et al., 2011). It also refers to different behavioral phenomena such as generosity or helpfulness (Aquino & Reed, 2002), non-prejudiced behavior (Monin & Miller, 2001) and environmentally friendly and sustainable behavior (Hopper & Nielsen, 1991; Mazar & Zhong, 2010). A common theme across different usages of the term moral behavior is that a behavior is considered as moral when it is in line with important virtues valued by a society (Haidt, 2001). One virtue that is valued in many societies is the idea of giving up personal resources or interests to preserve and enhance the welfare of others, the environment or society as a whole (Schwartz, 1992). This is consistent with Haidt's (2008) definition of moral systems as mechanisms that regulate selfishness and enable a cooperative social life. In my dissertation, I used this definition to refer to moral behavior more generally. Accordingly, I used the term non-moral to refer to behavior that did not involve giving up personal benefits for others but involved acting in a rather self-serving way. Within the experiments of this dissertation, I used more specific terms to refer to particular kinds of moral or non-moral behavior. Particular moral behaviors referred to were sustainable consumption, making an effort to improve the lives of others, or endorsing measures to improve the lives of others. Conversely, particular non-moral behaviors referred to were conventional consumption, making an effort to improve one's own life or endorsing measures to improve one's own. One additional reason to use the term non-moral was to indicate that people in these experiments were aware of the fact that there was also a moral alternative they did not engage in. The term *immoral behavior* was used with caution in this dissertation. I only used the term immoral in the third article, since the behavior in question involved clear violations of some basic human virtues.

THE INFLUENCE OF DIFFERENT PERSPECTIVES ON MORAL DECISION MAKING

The choice of moral actions is often determined by past moral choices (Zhong, et al., 2009). For instance, when a customer decides to leave a generous tip for the waitress, he might be less willing to sign up for a volunteering program later on. Phenomena like this have been termed moral licensing or moral balancing and have been replicated in various contexts (see Merritt, Effron, & Monin, 2010 for a review). For instance, Jordan and colleagues (2011) found that participants who recalled a past good deed showed less prosocial intentions afterwards compared to a control group that recalled a neutral behavior or an immoral behavior. In a similar vein, Zhong and colleagues (2010) found that buying sustainable products led people to be less generous subsequently and cheat more on a follow up task. Most authors agree that moral identity or self-perception plays an important role in moral balancing effects (Jordan, et al., 2011; Merritt, et al., 2010; Monin & Miller, 2001; Zhong, et al., 2009). Accordingly, Khan and Dhar (2006) found that perceiving oneself as sympathetic, warm, and helpful mediated moral balancing. However, there is less agreement concerning the theoretical model explaining the effect. To date, there are two prominent models that explain moral balancing, i.e. how people regulate their moral choices (see Effron & Monin, 2010 and; Merritt, et al., 2010 for an overview). One popular model is the moral credit model (Effron & Monin, 2010; Merritt, et al., 2010; Sachdeva, Iliev, & Medin, 2009). According to this model, past moral behavior establishes a certain credit that can be used up subsequently by being more selfish (Merritt, et al., 2010). The underlying image this model conveys is that moral decision making works like a bank account. Prior good deeds balance out subsequent moral omissions. In addition, a second model has been advocated, proposing that past moral behavior establishes a certain credential that allows people to reinterpret their future behavior in a self-serving way (Effron & Monin, 2010; Merritt, et al., 2010; Monin & Miller, 2001). The underlying image conveyed in this model is not a bank account, but rather a lens through which future behavior is perceived. Prior good deeds provide the ground for reframing subsequent moral omissions as harmless.

One problem with these models is that they account for moral balancing effects, i.e. the effect that past moral behavior discourages future moral striving, but do not account for other effects found in the literature. Thus, a closer look into the literature reveals that in addition to such moral balancing effects, there are examples for the exact opposite effect. That is to say, evidence has also shown that past moral behavior encourages more instead of less future moral striving (Burger & Caldwell, 2003; Cornelissen, Dewitte, Warlop, & Vincent, 2007; Cornelissen, Pandelaere, Warlop, & Dewitte, 2008; Freedman & Fraser, 1966). In accordance with Fishbach (2009), I termed this second phenomenon a moral highlighting effect, because it involves the idea that a past moral action is highlighted again and not balanced in the future. For example, Cornelissen and colleagues (2008) found that people who were made aware of their own frequently performed sustainable behaviors in the past made more sustainable choices in subsequent decisions compared to participants who had focused on less frequent sustainable behaviors or non-sustainable behaviors in the past. Another example of a moral highlighting effect is the foot-in-the-door-effect (Burger & Caldwell, 2003; Freedman & Fraser, 1966). In one study, people who agreed to sign a petition to support the homeless were more likely to volunteer for a homeless shelter two days later – in particular when they were labeled as 'someone who cares about people in need'. In this study, as well as in the study of Cornelissen and colleagues (2008) it was also shown that moral self-perception played an important role. Thus, just like in the case of moral balancing, the moral highlighting effects found in both studies were mediated by changes in people's self perception.

In sum, it seems that past moral behavior can theoretically motivate behavior in both directions. It can discourage future moral behavior but also facilitate it. In both cases, changes in self-perception seem to play an important role. To explain this puzzling pattern, it appears that the more prominent approaches currently discussed in the literature are not sufficient. In this dissertation it is argued that goal regulation theories (Fishbach & Dhar, 2005; Fishbach, Dhar, & Zhang, 2006; Fishbach, et al., 2009; Gollwitzer, 1986; Gollwitzer, Sheeran, Michalski, & Seifert, 2009; Gollwitzer, Wicklund, & Hilton, 1982; Koo & Fishbach, 2008; Wicklund & Gollwitzer, 1981) offer a more promising framework to explain both moral balancing and moral highlighting effects. They also provide a more thorough understanding of the role of positive self-perception in these effects.

Goal regulation theories

Goal regulation theories offer an alternative model that can explain when and why moral balancing or moral highlighting effects occur (Fishbach & Dhar, 2005; Fishbach, et al., 2006; Fishbach, et al., 2009; Gollwitzer, 1986; Gollwitzer, et al., 2009; Gollwitzer, et al., 1982; Koo & Fishbach, 2008; Wicklund & Gollwitzer, 1981). One basic assumption of goal regulation theories is that people intuitively conceptualize personally important motives in terms of goals. These goals are general intentions that can be addressed by a variety of goal congruent activities. The underlying model is that there is a field of tension defined by different goals and that this

tension can be reduced by successful enactment of goal congruent activities (Wicklund & Gollwitzer, 1981). Usually, when people engage in a goal congruent action, they monitor goal progress in order to determine when a goal is achieved (Fishbach, et al., 2009; Gollwitzer, 1986; Wicklund & Gollwitzer, 1981). Successful achievement leads to reduced tension and liberates people to address alternative goals. This dynamic can be described as a pattern of balancing. However, there are also cases in which an attempt toward goal achievement fails, so the individual is left with a perception of lacking progress (Brunstein & Gollwitzer, 1996). In this case, prior goal congruent behavior does not liberate people to address alternative goals but rather encourages them to further pursue the same goal. This dynamic can be described as a pattern of highlighting. Finally, according to Fishbach's self-regulation theory (Fishbach, et al., 2009) people can not only monitor goal progress, but can also monitor goal commitment when engaging in goal congruent action (Fishbach, et al., 2009). In this case, people do not determine the achievement of a goal but rather gain information about whether the goal is valuable to them (Fishbach, et al., 2009). Monitoring goal commitment can also lead to a pattern of highlighting, where people continue striving for the same goal. Note that highlighting and balancing are terms used only to describe a behavioral pattern. The underlying cause for balancing or highlighting can differ. For instance, a highlighting pattern could be caused by a perceived lack of goal progress or a perceived commitment to a goal.

Self-completion theory

Self-completion theory is an early goal regulation theory proposed by Gollwitzer and colleagues (Gollwitzer, 1986; Gollwitzer, et al., 2009; Gollwitzer, et al., 1982; Wicklund & Gollwitzer, 1981). It assumes that people conceptualize facets of their own identity as personal goals. In order to achieve these goals, people engage in symbolic activities that reflect the

identity goal. If successful, symbolic activities lead to a feeling of goal progress, also called symbolic self-completion. In turn, this perceived progress leads to reduced tension and striving for similar goal congruent activities much like it is found in moral balancing effects. Therefore, it is not surprising that self-completion theory has been used to explain moral balancing effects (Jordan, et al., 2011). However, an important element of self-completion theory is social recognition, i.e. the theory states that people can only derive a perception of progress or goal attainment when the symbolic activities they enact are recognized by others (Gollwitzer, 1986; Wicklund & Gollwitzer, 1981). If this is not the case, people may end up with a lack of progress which encourages more goal congruent behavior subsequently instead of less. The influence of social recognition has not been investigated thoroughly in the moral balancing literature. The aim of the first article of this dissertation is to test the influence of social recognition on future moral striving. The implications of this article are twofold: on the one hand, it supports the idea that moral balancing is a consequence of people conceptualizing their moral behavior in terms of progress. On the other hand, it reveals an important boundary condition of moral balancing that allows for better predictions of its occurrence in the future.

Self-regulation theory

Self-regulation theory is a more recent framework proposed by Fishbach and colleagues (Fishbach & Dhar, 2005; Fishbach, et al., 2006; Fishbach, et al., 2009; Koo & Fishbach, 2008). Similar to self-completion theory, the authors argue that people usually monitor their own behavior in terms of goal progress. However, self-regulation theory makes an important extension to this claim. It argues that people can also take a different perspective on their past self-relevant actions. On the one hand, past behavior can inform people about goal progress or accomplishment. Learning about goal accomplishment leads to less goal congruent behavior in

subsequent situations, which is a dynamic of goal balancing. On the other hand, past behavior can also inform people about their goal commitment. Thus, if people are focused on commitment instead of progress, their past behavior informs them about whether a personal goal is valuable to them or not. In turn this leads to more goal congruent behavior in subsequent situations, which is a dynamic of goal highlighting. To date, the potential influence of different goal perspectives has been discussed in the literature (Merritt, et al., 2010) but has not been tested empirically in the moral domain. However, a thorough analysis of the literature reveals that the different perspectives described in self-regulation theory were at least implicitly present in some of the research designs that were used to study moral balancing and highlighting effects. Specifically, when moral highlighting was found, participants were focused on repeatedly shown moral behaviors (Cornelissen, et al., 2008) or encouraged to attribute their past behavior to a stable attitude (Burger & Caldwell, 2003), possibly triggering a commitment perspective. When moral balancing effects were found, participants were focused on single moral behaviors and not encouraged to attribute their past behavior to a stable attitude (Jordan, et al., 2011; Khan & Dhar, 2006; Monin & Miller, 2001). This leads to the conclusion that one should integrate both perspectives into a single paradigm in order to study their opposing effects and to broaden the scope of current theories on moral decision making that only account for balancing effects. Essentially, this is the goal of the second article of this dissertation.

THE INFLUENCE OF CONCEPTUAL METAPHORS AND LAY THEORIES ON MORAL JUDGMENT

The first two articles of this dissertation focused on different perspectives that people take on their past moral behavior and how these perspectives shape their future moral decision

making. The third article investigated a conceptual metaphor that people apply when they approach moral judgments. More specifically, it was investigated if the concept of weight is metaphorically related to judgments of stimuli with a moral meaning. As with the previously described perspectives, conceptual metaphors shape moral perception rather implicitly, i.e. without their explicit knowledge (Thibodeau & Boroditsky, 2011). The research idea is mainly grounded in conceptual metaphor theory (Lakoff & Johnson, 1980; Landau, Meier, & Keefer, 2010). In addition, moral contamination theory is integrated (Haidt, 2003a; Nemeroff & Rozin, 1994; Rozin, et al., 1986).

Conceptual metaphor theory in the context of morality

According to conceptual metaphor theory, people approach complex and abstract social concepts with the help of intuitive and concrete concepts (Lakoff & Johnson, 1980; Landau, et al., 2010). The reason for this is that these concrete concepts help people to better understand the meaning or implication of an abstract concept (Lakoff & Johnson, 1980; Landau, et al., 2010). Researchers have identified a number of metaphorical relationships between concrete intuitive concepts and abstract social concepts (see Landau, et al., 2010 for a review). For instance, people who feel warm (concrete concept) perceive higher social proximity towards others (abstract concept), because warmth exemplifies the element of approach and is often experienced in situations of social connectedness (IJzerman & Semin, 2009). Importantly, although the original conceptual metaphor theory (Lakoff & Johnson, 1980) suggested only a one-way influence from concrete, intuitive concepts (warmth) to abstract concepts (social proximity), Landau and colleagues (2010) and Barsalou (2008) have argued that the conceptual link also works the other way around. Accordingly, social proximity can also influence people's judgment of warmth in a room (Zhong & Leonardelli, 2008).

Within the domain of morality, only few metaphorical relationships have been researched. Besides some research on the relationship of verticality and divinity (Meier, Hauser, Robinson, Friesen, & Schjeldahl, 2007), most publications focused on the concept of physical purity (Lee & Schwarz, 2010, 2011; Schnall, Haidt, Clore, & Jordan, 2008; Sherman & Clore, 2009; Zhong & Liljenquist, 2006; Zhong, Strejcek, & Sivanathan, 2010). For instance, studies have shown that a physically dirty as opposed to clean room causes more severe moral judgments (Schnall, et al., 2008) or that moral transgressions cause feelings of dirtiness and urges to clean oneself (Lee & Schwarz, 2010; Zhong & Liljenquist, 2006). One reason why physical purity and morality are metaphorically related could be that moral emotions such as moral disgust trigger similar physiological reactions as physical disgust (Schnall, et al., 2008). Thus, it is likely that the concept physical purity captures some of the quality and vividness of the emotional consequences that follow from immoral and moral behavior. This is consistent with other research showing that metaphors are often employed to capture the quality and vividness of affective states (Ortony & Fainsilber, 1989).

However, purity may not be the only concept relevant to morality. After all, people do not only *make their hands dirty* when stealing something but also put a *burden* or *emotional baggage* on their shoulders. For instance, the Bible speaks of sin as 'a great weight' (Psalm 38.4, Lutheranian translation, 1984) and the Quran says that 'whoever earns a fault ... has indeed burdened himself with falsehood' (Chapter 4, Vers 112, Hilali & Khan Translation, 1999). Also, a common expression for clearing one's consciousness is to *get something off one's chest* or to *alleviate* oneself. And when someone committs a crime, this person is *charged* with a felony and later *discharged from his or her debt* when found not guilty. In sum, there is anecdotal evidence that people also apply weight metaphors in the context of morality. In line with conceptual

metaphor theory, it could be assumed that the concept of weight captures another quality of emotional consequences that follow from immoral and moral behavior, e.g. feelings of guilt or elevation (Tangney, et al., 2007). Some direct evidence for this idea comes from research showing that physical weight is related to guilt and moral behavior. More specifically Kouchaki, Gino, and Jami (2012) found that wearing a heavy backpack as compared to a light one led to higher levels of experienced guilt, less cheating, and more severe moral judgments. Based on the notion that the conceptual link between concrete and abstract concepts can also be reversed (Barsalou, 2008; Landau, et al., 2010), it can be assumed that changes in morality can also lead to corresponding changes in experienced weight. In particular, it could be possible that people physically experience the potential burden or elevation of a morally charged object. Some additional support for this assumption comes from a different strain of research that specifically addresses how people experience material objects that have a moral meaning.

The lay theory of moral contamination

In the prior section it was argued that people conceive immoral or moral behavior as an emotional burden or elevation. Interestingly, the literature shows that people also experience objects that are associated with such behavior as if they were literally charged with morality (Belk, 1988, 1991; Haidt, 2003a; Nemeroff & Rozin, 1994; Rozin, et al., 1986). For instance, Haidt (2003a) proposes that people avoid objects that have an immoral meaning because they perceive them as burdening or negatively contaminating. At the same time, they seek contact with objects that have a moral meaning because they perceive them as elevating or positively contaminating. The underlying lay theory is that material objects can actually assume a moral or immoral meaning, which is why they are then experienced differently from neutral objects. In one study, Rozin and Nemeroff (1994) provide some initial support for this idea. The authors

found that people imagine a new sweatshirt as less pleasurable to wear when it belonged to an evil person as opposed to a virtuous person. Unfortunately, there are few if any other studies that further investigate the specifics of this phenomenon. In particular, there is no research on how people experience an object differently when it has a moral meaning. Conceptual metaphor theory could point towards one way to approach this question. It predicts that people conceive of abstract meaning such as morality with the help of concrete concepts and that abstract meaning can even influence sensory experience (Barsalou, 2008; Landau, et al., 2010). Based on these assumptions, it could be argued that the phenomenon described broadly as moral contamination could be investigated more specifically within the framework of conceptual metaphors.

In the past section, important theories were described that relate to the research of this dissertation. These theories provide the basis upon which the empirical studies were designed, conducted, and integrated into research articles. In the following section, these articles will be outlined. Figure 1 illustrates the main aspects of the articles.

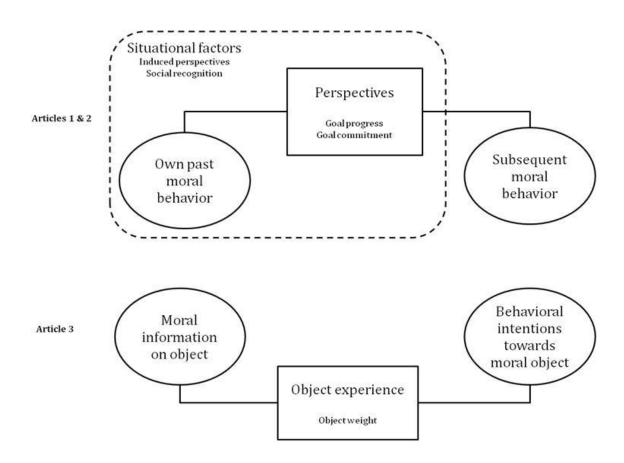


Figure 1: Overview of empirical articles

CONTENT OVERVIEW OF ARTICLES

The goal of this dissertation was to investigate the influence of subjective experiences on moral decision making and moral judgment. In the first two articles it was investigated how engaging in moral behavior can either encourage or discourage future moral striving depending on the perspective people take. The present research showed that one reason why past moral behavior sometimes discourages future moral striving can be that people conceptualize their moral behavior in terms of personal goal progress. Thus, when their past moral behavior allowed them to derive a feeling of goal progress or goal attainment, people showed less moral striving

subsequently. The present research also showed that this effect was more likely when a person's behavior had been recognized by other people as opposed to not. Furthermore, it was demonstrated that one can replace the perspective of goal progress by an alternative perspective of goal commitment and thereby change the balancing dynamic. Thus, if people conceptualized their moral behavior in terms of personal goal commitment, it encouraged them to engage in more future moral striving instead of less.

In the third article of this dissertation, conceptual metaphors that shape people's moral judgments were investigated. More specifically, it was researched if the concept of weight is related to judgments of moral objects. The present research showed that weight is indeed metaphorically related to morality and that people judged material objects with an immoral meaning as heavier compared to objects with a moral meaning. Furthermore, the experienced weight of moral or immoral objects predicted how people behaved towards those objects.

Article 1: To be Moral is to be Seen Moral: Lack of Social Recognition Encourages
Further Moral Striving.

In article 1, the role of social recognition in moral decision making was investigated. Based on assumptions of symbolic self-completion theory (Gollwitzer, 1986; Gollwitzer, et al., 2009; Gollwitzer, et al., 1982; Kohlberg & Hersh, 1977; Wicklund & Gollwitzer, 1981), it was hypothesized that people intuitively conceptualize self-relevant behavior such as moral behavior in terms of personal goals. Further, it was hypothesized that people derive a sense of progress or goal attainment from their past behavior when it is recognized by another person. This promotes a dynamic of moral balancing, in which past moral behavior leads to lower subsequent moral striving compared to past non-moral behavior. However, people derive a sense of lacking progress or goal attainment when their past moral behavior is not recognized by others. In turn,

this promotes a dynamic of moral highlighting, in which past moral behavior leads to higher subsequent moral striving compared to past non-moral behavior.

In order to investigate these hypotheses, two experiments were designed in which participants first engaged in a moral or non-moral behavior which was then either recognized by the experimenter or kept confidential. In experiment 1, a sustainable shopping task adapted from Mazar and Zhong (2010) was used as the independent variable. Prior research has shown that sustainable behavior reflects positively on people's self-perception as a moral person and that the shopping task used in this experiment influences people's subsequent generosity and cheating behavior (Mazar & Zhong, 2010). Participants in experiment 1 first engaged in sustainable or conventional shopping which was then either recognized by the experimenter or not. Afterwards participants' subsequent intentions to give up personal resources for the sake of others were measured with the help of a moral intentions scale.

In line with predictions, the results showed that with social recognition, past sustainable shopping led to lower subsequent moral intentions than past conventional shopping. Conversely, without social recognition, past sustainable shopping lead to higher subsequent moral intentions than past conventional shopping. However, experiment 1 had some limitations that were addressed in a follow-up experiment.

In experiment 2, a different manipulation of moral and non-moral behavior was used instead of the shopping task used in experiment 1. Also, participants' actual helping behavior was measured instead of their intentions as in experiment 1. In the behavioral task, half the participants were given an opportunity to endorse rather unselfish ways to improve university life, while the other half endorsed rather self-serving ways to improve university life.

In general, the results were in line with experiment 1. Without social recognition, past unselfish behavior led to more helping behavior than past self-serving behavior. However, with social recognition, there was a trend showing that past unselfish behavior led to less helping behavior than past self-serving behavior, but this was not significant.

In sum, the results of both experiments were in line with self-completion theory and contribute to the literature in several important ways. They demonstrate that social recognition can be an important boundary condition for moral balancing and imply that moral balancing effects can be conceptualized as a dynamic of goal regulation.

Article 2: A Matter of Perspective – Why Past Moral Behavior can Discourage and Encourage Future Moral Behavior.

In article 2, the idea that moral balancing could stem from perceptions of goal progress is investigated in more detail. In article 1, boundary conditions that solicited the perception of making goal progress or lacking goal progress were investigated. In article 2, it was investigated how one can actively induce people to conceptualize their past moral behavior in terms of progress. Moreover, the perspective of goal progress was replaced with an alternative perspective of goal commitment in order to actively change the dynamic of moral balancing into a dynamic of moral highlighting. Essentially, the idea is that people can derive moral self-perceptions from different perspectives which, in turn influences their subsequent moral striving.

To this end, two experiments were conducted. Framing manipulations were used to encourage people to take either a perspective of goal progress or an alternative perspective of goal commitment when thinking about their past moral behavior. Drawing from goal regulation theory (Fishbach & Dhar, 2005; Fishbach, et al., 2006; Fishbach, et al., 2009) it was hypothesized that a moral balancing dynamic occurs when people focus on goal progress or do

not focus on goals at all. If, however, people focus on goal commitment, a moral highlighting dynamic is likely to occur.

In experiment 1, the shopping task described in article 1 was used again. After participants had selected their products from a sustainable or conventional store, they were asked to reflect on their shopping behavior in terms of personal goals. While in the progress-focus conditions, participants answered several questions about their perceived progress towards sustainable goals, in the commitment-focus conditions they answered several questions about their perceived commitment towards sustainable goals. In a control condition, participants did not focus on goals, but engaged in a filler task. Finally, participants' subsequent intentions to give up personal resources for the sake of others were measured with the help of a prosocial intentions scale.

The results largely confirmed the hypotheses. Specifically, past sustainable shopping led to lower subsequent prosocial intentions than past conventional shopping when participants focused on progress, but led to higher prosocial intentions when participants focused on commitment. Not focusing on goals at all also led to a balancing pattern, but it did not reach significance. Although these results were generally in line with predictions, experiment 1 had some limitations that were addressed in a second experiment.

Experiment 2 replicated the first experiment conceptually with 3 important improvements. First, a new moral behavior task was developed based on a thorough analysis of existing tasks in the literature and a pretest. In this task, half of our participants made a real effort to improve a disabled person's life at university (unselfish condition), while the other half made a real effort to improve their own life at university (self-serving condition). Second, a more intuitive framing manipulation was used in which participants used a sliding scale to visualize

the distance between themselves and a goal in terms or progress or commitment. Third, participants' actual prosocial behavior in terms of generosity was measured with the help an incentivized dictator game.

The results of experiment 2 were consistent with the pattern found in experiment 1. When compared to self-serving behavior, past unselfish behavior led to lower subsequent generosity in the dictator game if participants focused on goal progress. However, the pattern reversed when they focused on goal commitment. In this condition past unselfish behavior instead led to higher subsequent generosity.

Together, the results of both experiments integrate seemingly contradictive evidence from past research by applying the overarching framework of goal regulation theory.

Article 3: Feel the Moral Weight on Your Shoulders – How Material Objects are Experienced as Heavier or Lighter through Moral Meaning

The third article deals with conceptual metaphors that shape people's perception and judgment of moral objects. In contrast to the first two articles, the focus is not on different perspectives that people apply to conceptualize their own moral behavior, but rather on conceptual metaphors related to morality and the perception of objects with a moral meaning. The main goal of the third article was to investigate the extent to which the concept of weight is metaphorically related to morality. More specifically, it was investigated whether people rely on the concept of weight in order to grasp the implications of using or owning a moral object. The research idea is founded on two different lines of research (Belk, 1988, 1991; Haidt, 2003a; Landau, et al., 2010; Nemeroff & Rozin, 1994; Rozin, et al., 1986) that both converge on the idea that people experience a material object differently depending on knowledge about its moral meaning. Based on anecdotal evidence and previous findings about the connection of morality

and weight, the hypothesis was derived that people experience objects associated with immoral meaning as physically heavier than objects associated with moral meaning. I called this the moral weight effect. Moreover, a second hypothesis was derived: if experienced weight is an indicator of the object's morality it should predict behavioral tendencies to approach or avoid the object.

In order to investigate these hypotheses, 3 experiments were conducted. In experiment 1, participants received a chocolate bar together with some information about its production conditions. While half the participants received their chocolate bar with production conditions described as fair, the other half received their product with production conditions described as unfair. Then, participants were asked to evaluate their product on several dimensions including an estimate of its physical weight. Finally, participants were told to assume they could consume the product and asked about their consumption behavior in order to measure intentions to avoid or approach the product.

The results fully confirmed the hypothesis that the immoral object is experienced as heavier compared to the moral object. Regarding the second hypothesis that object weight would predict product avoidance intentions, results were not in line with expectations. Significant differences in avoidance intentions by conditions were found, but experienced object weight did not predict avoidance intentions. In sum, experiment 1 provided initial evidence for a moral weight effect, but also left some open questions about possible alternative explanations and possible methodological flaws. In order to address these questions, 2 more experiments were conducted.

The main goal of experiment 2 was to rule out some alternative explanations that might explain the moral weight effect described in hypothesis 1. In particular, it was investigated if

weight judgments could be explained by perceived relevance of information, perceived healthiness of the product, differences in participant's mood or mere semantic associations between weight and morality. In order to rule out these alternative explanations, a second experiment was designed with the following changes: a neutral condition was introduced; perceived relevance of the received information was measured; a non-food-product was used; and a control condition was introduced in which participants received a product unrelated to the moral information they had received before. The results of experiment 2 fully confirmed hypothesis 1 and did not support any of the alternative explanations investigated.

A third experiment was conducted to address hypothesis 2 again, i.e. that object weight predicts tendencies to approach or avoid the object. It was possible that methodological issues in experiment 1 contributed to the fact that a connection between object weight and object avoidance was not found. Therefore, experiment 1 was replicated, using an open ended weight measure instead of a scale and using a less strong morality manipulation. The results of experiment 3 provided support for hypotheses 1 and 2. Again, the unfair product was experienced as heavier compared to the fair product. Furthermore, after controlling for morality, weight was found to be a significant predictor of the desire to avoid the product.

Together, the results of these 3 experiments support the idea that people rely on the concept of weight to grasp the meaning and implications of moral objects.

GENERAL DISCUSSION

The experiments conducted for this dissertation were intended to investigate the influence of subjective factors that shape moral decision making and moral judgment. Together, these findings contribute towards a better understanding of moral decision making and judgment as well as the underlying cognitive processes involved.

Articles 1 and 2 focused on perspectives people take on their own past moral behavior and how these perspectives relate to their future moral decision making. The research presented showed that past moral behavior can indeed discourage future moral striving, as is proposed in the moral licensing literature (Merritt, et al., 2010). However, the research also showed important boundary conditions for this effect and shed some light into the underlying processes responsible for it. The results of the first article imply that social recognition is an important boundary condition of moral balancing effects. Specifically, without social recognition, past moral behavior encouraged future moral striving rather than discourage it. With social recognition, the expected balancing pattern was found in the first experiment. These results are congruent with self-completion theory, which assumes that social recognition leads people to derive a sense of goal attainment from their past goal congruent behavior (Gollwitzer, 1986; Gollwitzer, et al., 1982; Wicklund & Gollwitzer, 1981). Thus, the results of article 1 not only delineate boundary conditions of moral balancing but also point to the possibility that perceived progress or goal attainment is responsible for these effects. In the second article, this issue was addressed in a more direct way. Specifically, people were directly encouraged to perceive their past moral behavior from a progress perspective or a commitment perspective. Congruent with the assumption that moral balancing is a consequence of perceived progress, experiment 1 showed that people who conceptualized their sustainable shopping behavior in terms of progress

exhibited lower prosocial intentions subsequently. Experiment 2 showed the same pattern of results using a different experimental design. Thus, when people conceptualized their past unselfish behavior in terms of progress, they shared less money in a subsequent dictator game. Importantly, across both experiments the moral balancing pattern was reversed into a moral highlighting pattern when people conceptualized their behavior from a commitment perspective.

Together, the findings of articles 1 and 2 contribute towards integrating the goal regulation theories of Gollwitzer (Gollwitzer, 1986; Gollwitzer, et al., 1982; Wicklund & Gollwitzer, 1981) and Fishbach (Fishbach & Dhar, 2005; Fishbach, et al., 2006; Fishbach, et al., 2009; Koo & Fishbach, 2008) into the moral decision making domain. The results of both articles converge on the idea that the phenomenon of moral balancing can be explained as a dynamic of goal regulation and a consequence of a goal progress perspective. In addition, situational factors such as a lack of social recognition or encouragement towards adopting a commitment perspective can contribute towards changing the pattern of balancing into a pattern of highlighting. Concerning these latter effects in particular, it is important to distinguish different theoretical explanations underlying the different highlighting effects. Thus, without social recognition, past moral behavior is an inefficient attempt for self-completion and therefore leads to more subsequent moral striving. Consistent with Gollwitzer's self-completion theory, the root of the highlighting effect here is a perceived lack of progress. However, with an encouragement to adopt a commitment perspective, past moral behavior indicates the value of a goal and therefore leads to more subsequent moral striving. The root of the highlighting effect here is a learning process by which a certain goal is integrated into one's self image. Similar to the learning process described in self-perception theory (Bem, 1972), past moral behavior

informed people about a stable attitude or commitment they possess which then promotes congruent behavior.

While article 1 and 2 focused on perspectives people take when observing their own behavior, article 3 took a more basic approach, investigating a conceptual metaphor that influences moral judgment. The research showed that people conceptualize moral meaning in terms of physical weight. Accordingly, immoral objects were experienced as heavier compared to moral objects and experienced weight predicted people's behavioral intentions towards those objects. On a meta-level, article 3 shares an important theme with articles 1 and 2. The concept of weight shares some meaning with the concept of balance. Lifting something heavy can lead to an imbalance that calls for compensation. In a very literal sense, the weight metaphor might therefore be related to moral balancing phenomena. One could speculate that conceptualizing behavior in terms of weight may possibly serve as another perspective that has the power to influence people's moral decision making. If people were to think of their past immoral behavior in terms of weight added to their shoulders, they might be more inclined to engage in moral behavior subsequently in order get rid of that weight again. Conversely, if people were to think of past moral behavior in terms of lightness they might feel more free engage in moral transgressions subsequently.

In addition to the possibility just described, there could be yet other ways to transfer the weight metaphor into the moral balancing and highlighting literature, linking it also to goal regulation theories. Thus, people could conceptualize their past behavior in terms of weighing self-serving and unselfish goals against each other. Possible implications of this perspectives are discussed in a subsequent section on future research.

Limitations

Overall, there are some limitations to this dissertation that should be addressed. Across the different experiments, different dependent variables were used to measure moral intentions, moral behavior, or other judgments such as the experienced weight of products. Almost all of these measures were derived or adapted from other research published in the respective field. Some were also pretested. Despite these precautions, some of the measures did not fully meet my expectations in terms of performance. For instance, in experiment 1 of the first 2 articles, the items intended to measure people's intentions only showed a consistency of .50, which is rather low. One reason for this could be that the single items measured behaviors that were quite different from each other. Another reason for this could be that the different items were embedded within other items to conceal the purpose of the measurement. Finally, some of the items suffered from ceiling effects which can also contribute to a low consistency. One potential implication of a low alpha could be that the measure's capability to predict construct-related criteria, i.e. its validity is limited. However, Schmitt (1996) argues that a low alpha is not necessarily a huge threat to validity when a measure has other desirable properties such as a reasonable unidimensionality. Therefore, I conducted factorial analyses to provide a statistical rationale for the unidimensionality of the scales used. Finally, I also conducted additional studies using other dependent measures to replicate my findings. After all, replication establishes more direct evidence that a result found once was not just random. In addition to these steps taken, future studies should employ more established and pretested scales.

Other measurement issues encountered in this dissertation were violations of the normality assumption in some measures. To account for these violations, non-parametric tests were conducted to corroborate the results of parametric tests.

Finally, there are some limitations concerning the external validity of the empirical results. First, all studies except study 1 and 3 of article 3 were conducted as laboratory experiments. Despite the clear advantages of a controlled environment in terms of internal validity, laboratory experiments are necessarily artificial and lack some external validity. Second, the samples involved in all studies consisted of students aged between 18 and 30. A restrained subject pool like this is not representative for other environments and could possibly limit the generalizability of the results. To address both these issues, field studies could be conducted.

Theoretical Implications

As for theoretical implications, the three articles of this dissertation contribute in several ways to the existing literature. The major contribution of article 1 is to investigate social recognition as a boundary condition for moral balancing effects and to show that a lack of social recognition promotes a moral highlighting pattern. This enhances the understanding of moral balancing phenomena and closes a research gap recognized by various researchers in the field (Jordan, et al., 2011; Merritt, et al., 2010). More importantly, it contributes towards integrating self-completion theory (Brunstein & Gollwitzer, 1996; Gollwitzer, 1986; Gollwitzer, et al., 2009; Gollwitzer, et al., 1982; Wicklund & Gollwitzer, 1981) into the moral balancing literature, thereby opening up a wider scope on moral balancing phenomena. The wider scope proposed is to see moral balancing as a dynamic of goal regulation. This view is also supported and taken one step further by the second article of this dissertation. The major contribution of the second article is to investigate more directly how a progress perspective promotes moral balancing. In addition it shows how an alternative perspective of goal commitment can promote a moral highlighting pattern. The article includes a review of the literature on moral balancing effects and

the seemingly inconsistent literature on moral highlighting effects. By analyzing small but important differences in the various past research designs, it is concluded that alternative perspectives may be responsible for the opposing dynamics found. In line with ideas discussed by Merrit and colleagues (2010), self-regulation theory (Fishbach & Dhar, 2005; Fishbach, et al., 2006; Fishbach, et al., 2009; Koo & Fishbach, 2008) is proposed as an overarching framework that accounts parsimoniously for both moral balancing effects due to a perspective of goal progress and moral highlighting effects due to a perspective of goal commitment. This is a clear step forward in the field as self-regulation theory provides a more complete understanding of the research to date and opens up new avenues for investigation. It also allows accounting for the role of self-perception in moral balancing and highlighting effects. Thus, the question why a positive self-perception derived from past moral behavior can sometimes encourage and sometimes discourage future moral striving has surfaced in the literature but not been resolved sufficiently. The key contribution of self-regulation theory in this matter is to distinguish between two kinds of self-relevant goal information people infer from their past moral behavior, i.e. information about goal progress or goal commitment. The difference between a progress and commitment perspective also relates to other research on self-perception that has proposed similar distinctions. For instance, action identification theory states that people can conceive of their (past) behavior in a rather concrete or a rather abstract fashion (Vallacher & Wegener, 1987). The terms concrete and abstract share some common ground with perceived progress and commitment and thus connect the findings of this dissertation to another strain of literature on action identification and behavioral construal (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Schmeichel & Vohs, 2009). The influence of concrete vs. abstract construal has also been explored within the domain of moral behavior (Conway & Peetz, 2012).

Together, articles 1 and 2 contribute towards integrating goal regulation theory into the moral decision making domain in order to complement other theoretical approaches proposed in the literature (see Merritt, et al., 2010 for a review) and allowing for a better overview of existing research.

In article 3, similar to the articles 1 and 2, theories from different backgrounds are integrated. Specifically, the literature on the lay-theory of moral contamination is reviewed, outlining the phenomenon that people experience material objects differently because of their moral meaning (Belk, 1988, 1991; Haidt, 2003a; Nemeroff & Rozin, 1994; Rozin, et al., 1986). It is then argued that conceptual metaphor theory (Lakoff & Johnson, 1980; Landau, et al., 2010) might offer a pathway to investigate the process behind moral contamination. Therefore, one contribution of the third article is to connect these different theories and investigate potential relationships between them. Apart from this, another contribution of article 3 is to extend the metaphorical building blocks researched in the literature on moral judgment. In particular, many researchers have focused on the concept purity and its relationship to moral disgust and moral behavior (Elliott & Radomsky, 2009; Gino & Desai, 2012; Lee & Schwarz, 2010; Ritter & Preston, 2011; Rozin, et al., 1999; Schnall, et al., 2008; Sherman & Clore, 2009). Purity is an important concept to consider that can enhance the understanding of moral judgment and decision making processes. However, the concept of weight can be a valuable extension that might inspire future research because, compared to purity, it emphasizes different aspects of morality that potentially entail other behavioral implications. To illustrate this, the following sections on applications and future research will provide some examples.

Practical Implications

The results found across the 3 articles point to some practical implications in different areas of application. The results of article 1 could possibly relate to the question how public environments influence moral decision making. The results of article 2 may have implications for fund raising activities or may serve as a basis for marketing campaigns. Article 3 could point to some implications in terms of product value.

Article 1 demonstrated the influence of social recognition on the dynamic between past moral actions and future morals striving. From a more general point of view, the results of this article could allude to the nature of environments that promote morally dubious decisions. For instance, people who receive a lot of attention from the media or society in general may be more prone to take a good deed as license for moral transgression because social recognition inflates their perceived progress on moral goals. Politicians are possibly at greater risk of falling prey to such a mechanism, since they are often faced with extensive media coverage.

Article 2 showed how a perspective of goal commitment can induce people to take their past moral behavior as encouragement for future moral striving. This mechanism offers a number of interesting applications. For instance, it could be used to improve the success of fund-raising activities for causes related to sustainability. When a fund-raiser approaches a potential donor, he could start the conversation by asking a few questions about the individual's past commitment to sustainable activities. Ideally, the fund-raiser would ask for very common behaviors that people will readily admit their commitment to (Cornelissen, et al., 2008). Importantly, the phrasing of each question should induce a commitment perspective. After having finished this small interview, potential donors are possibly more open to support the fundraiser, thus increasing his success. A second way to exploit this mechanism could be to apply it to marketing campaigns for

sustainable products. For instance, consider a supermarket chain that specializes in organic and fair-trade products and is situated in a neighborhood with other more conventional supermarkets that sell conventional products. In many cases, customers may do some of their shopping in the more expensive sustainable market, while at the same time buying most of their products in the cheaper conventional markets, thus exhibiting a balancing dynamic. One way to change this pattern and increase the success of the sustainable market could be to market the sustainable products as indicator of a person's commitment towards the sustainable cause. Based on repeated experiences of perceived commitment, people may to some extend adopt this perspective and start buying sustainable products more often, developing stable habits.

In the third article, the influence of weight metaphors in moral judgments was demonstrated. The results of this article have mostly theoretical implications, as they allude to a potentially important metaphorical building block in moral judgment. However, there is also some applied value in these results. With some products, weight experience might actually play an important role for the product value. Consider for instance a running shoe that is advertised as particularly light. If the production conditions known about this shoe influence subjective experiences of its heaviness, this could either harm or benefit the product's value.

Future research

The research of this dissertation investigates a range of topics that deserve further attention and points to new related research topics. Specifically, the processes underlying the two distinct highlighting effects in articles 1 and 2 could be investigated further. In regards to article 3, a new idea to consider would be to compare the influence of a weight metaphor to the influence of a purity metaphor on moral judgments. Finally, the metaphor approach taken in article 3 could be combined with the goal-regulation approach taken in the articles 1 and 2.

In articles 1 and 2, different dynamics of moral balancing and moral highlighting were investigated. As noted previously, it is likely that there are different processes underlying the highlighting pattern in article 1 and the highlighting pattern in article 2. Specifically, the highlighting pattern found in article 2 was assumed to stem from a learning process by which past moral behavior informs people about a stable attitude or commitment they possess. If this was the case, one could hypothesize that people change their self-concept accordingly and should exhibit a certain degree of consistency in their behavior over time. Therefore, one way to continue this line of research would be to compare the stability of behavior under a commitment and a progress perspective across several points in time. A possible way to do this would be to replace the one shot dictator game by a repeated game. Another approach would be to have people return to the lab a few days later or have them document their every-day behavior in a diary for some time after the experiment. If stability was found under a perspective of commitment but not progress, this would have important implications. For instance, it would provide a theoretical basis for how to change long term habits.

In contrast to article 2, the highlighting pattern found in article 1 was potentially not related to a learning process but rather encouraged by an inefficient attempt for self-completion due to the lack of social recognition. Accordingly, it should not be linked to changes in self-perception and potentially may not be exhibited consistently over time. Both of these predictions can be tested in future studies. In addition to these questions, a more basic extension to article 1 would be to take individual differences in people's reactions towards social recognition into account. There is some evidence that, depending on individual preferences for certain goals, people might react differently to social recognition of their past moral behavior (Cialdini & Trost, 1998; Lerner & Tetlock, 1999; Schlenker, Dlugolecki, & Doherty, 1994). Specifically,

individuals concerned with conforming to the views of others or concerned with impression management or prestige may show a highlighting pattern under conditions of social recognition instead of the balancing pattern that was observed in experiment 1 of article 1. In the case of conformism, social recognition possibly enhances accountability (Lerner & Tetlock, 1999). However, in the case of prestige, social recognition possibly triggers costly signaling. Taking into account such individual goal preferences is a way to compare the predictions of self-completion theory (Brunstein & Gollwitzer, 1996; Gollwitzer, 1986; Gollwitzer, et al., 2009; Gollwitzer, et al., 1982; Wicklund & Gollwitzer, 1981) to predictions of theories on behavioral commitment (Cialdini & Trost, 1998; Lerner & Tetlock, 1999; Schlenker, et al., 1994). This could result in a more holistic picture of the impact of social recognition on subsequent moral decision making.

In article 3, the influence of a weight metaphor in moral judgment was investigated. The specifics of this process deserve more attention. For instance, it was suggested that weight might serve as indicator of morality because it relates to emotional experiences such as guilt or elevation. This hypothesis should be tested more directly by investigating the relationship of experienced guilt (elevation) and experienced weight after immoral (moral) consumption. In addition, the hypothesized mediation effect of weight on product avoidance should be investigated more thoroughly with a causal mediation study.

In general, the influence of metaphors on moral judgment and decision making provide further potential for research that goes beyond the scope of the studies presented in this dissertation. While the concept of weight was investigated in article 3, another prominent metaphor that has been widely researched is purity. However, very little research so far is devoted to comparing the impact of alternative metaphors with each other. One example of this

strategy can be found in an article from Thibodeau and Boroditsky (2011). The authors showed that framing a crime problem with one of two contrasting metaphors can influence how people reason about the problem. One strategy for future research could be to compare the impact of metaphors such as purity and weight. Consider for instance a person who committed a crime. If people adopt a purity mind-set, a criminal is potentially a dirty and disgusting person that one should avoid contact with. The behavioral implication for society could be to isolate and expel this person. However, if people adopt a weight mind-set, a criminal is potentially a burdened and guilty person who should probably restore or repay his debt. The behavioral implication here could be to provide options to enable restitution. Hence, it may be possible that the focus of attention is somewhat shifted from damage control and self-protection to empathy and restitution depending on the metaphor applied. The behavioral implications of both these mind-sets obviously differ. Future research could investigate these different implications systematically.

Finally, one could combine the metaphor approach taken in article 3 with the framework of goal regulation theory relevant in the articles 1 and 2. Specifically, metaphors could be used as an intuitive tool for shaping the relationship between different goals that people may hold. To illustrate this, consider an individual who holds two goals at the same time. On the one hand, the individual wants to be helpful towards others. On the other hand, the individual also wants to maximize his own individual benefit. One way to integrate these two goals is to think of them as dependent on each other, such that engaging in one goal means reducing progress towards the other goal. Basically, this resembles the logic of a scale in which one side of the scale goes down when the other goes up. A second way to integrate these two goals is to think of them as independent of each other, such that engaging in one goal does not mean reducing progress towards the other, but simply means than one goal is preferred over the other. Basically, this

resembles the logic of a weight that is only put on one of two sides. One prediction would be that thinking of the 2 goals as dependent promotes a balancing dynamic, whereas thinking of the two goals as independent alternatives promotes a highlighting dynamic. In order to induce people with the idea of goal-dependence or independence one could use two alternative versions of a weight metaphor. In a pilot study, I tested this approach. I ran an online experiment (N = 70) in which people first engaged in the moral vs. non-moral behavior task used in experiment 2 of article 2. Afterwards, all participants were asked to evaluate their past behavior in terms of two goals: the goal of helping themselves and the goal of helping others. Half the participants were asked to weigh the two goals against each other, using a scale on which they could indicate the relative weight of each goal compared to the other. The other half was asked to weigh the two goals independently of each other, using a scale on which they could indicate whether they had assigned more weight to one goal or the other independently. Finally, people engaged in a partly incentivized task similar to an anonymous dictator game. Results showed a pattern partly in line with assumptions. In the dependent goal conditions, people exhibited a moral balancing effect. In the independent condition, they did not. However, despite the simple tests being significant, the overall interaction effect did not reach significance, possibly due to the small sample size and a large standard deviation in the dependent variable.

Conclusion

In sum, this dissertation shows that moral decision making and judgment is not just a matter of careful reasoning. Rather, it seems that subjective experiences have an important impact and that people rely on these experiences when choosing their route of action.

In particular, it was shown that situational differences such as social recognition or the encouragement of different perspectives influence how individuals experience their past moral or

non-moral behavior. In turn, this led to different courses of future moral action. Specifically, the present research demonstrates that people do not show the same level of moral engagement across different situations, but rather integrate their own interests with the interests of others in an effort to regulate different goals. The situational factors investigated point to underlying causes of these regulatory processes.

In addition, the concept of weight was investigated as a metaphorical building block in moral judgment. It was shown that heaviness is one perceptual route of access to grasp moral meaning. This adds to the understanding of how people conceptualize moral meaning and complements existent research on conceptual metaphors in the literature. It also allows drawing connections between different strains of literature such as lay theories, cognitive linguistics and research on emotions.

Together, the results of this dissertation contribute to understanding moral decision making and judgment, considering in particular the boundedness or subjectiveness of each individual (Chugh, et al., 2005; Haidt, 2001). However, despite the fact that some questions were answered, many other questions are still open. Therefore, one important contribution of this dissertation is pointing towards promising new directions of research and application.

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ARTICLE 1

To be Moral is to be Seen Moral – Lack of Social Recognition Encourages further Moral

Striving

(current status: under review at Personality and Social Psychological Bulletin.)

To be Moral is to be Seen Moral: Lack of Social Recognition

Encourages Further Moral Striving.

Moritz Susewind, Erik Hoelzl, Gari Walkowitz

University of Cologne

Moritz Susewind, Erik Hoelzl, Department of Economic and Social Psychology,
University of Cologne, Germany.

Gari Walkowitz, Department of Corporate Development and Business Ethics,

University of Cologne, Germany.

Author Note

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Cordaro for helpful comments. Correspondence concerning this article should be addressed to

Moritz Susewind, Department of Economic and Social Psychology, University of Cologne,

Albertus-Magnus-Platz, 50923 Cologne, Germany, E-mail: moritz.susewind@uni-koeln.de

TO BE MORAL IS TO BE SEEN MORAL

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Abstract

In this paper we investigate across two experiments how social recognition of moral behavior influences subsequent moral striving. Building on self-completion theory, we hypothesize that social recognition influences whether people derive a sense of progress from their past moral behavior or not. Our results show that without social recognition, past moral behavior leads to higher subsequent moral intentions (study 1) and more actual helping behavior (study 2) compared to past non-moral behavior. Conversely, with social recognition, past moral behavior leads to lower subsequent moral intentions (study 1) and, by trend, to less actual helping behavior (study 2) compared to past non-moral behavior. Our results shed a new light on potential boundary conditions for moral balancing effects and underscore the view that these effects can be conceptualized as a dynamic of goal regulation.

Keywords: Morality, Self-Regulation, Social Influence, Helping/Pro-Social Behavior, Licensing

To be Moral is to be Seen Moral: Lack of Social Recognition Encourages Further Moral Striving

Imagine you just finished eating at a café and walk up to the counter to pay your bill. While paying, you leave a generous tip in the tip jar on the counter that doesn't go unnoticed by the waitress. Upon leaving, the waitress asks you whether you would be willing to support a store-launched charity program and volunteer a few hours doing community work. Would you be willing to support the charity?

According to theories on moral balancing (see Merritt, Effron, & Monin, 2010 for a review), you probably wouldn't. The reason for this is that your generous tipping behavior provided you with a license. It allowed you to derive a positive self-perception, implying that you achieved or even exceeded your moral ideal (Zhong, Liljenquist, & Cain, 2009). This, in turn, decreases your motivation to engage in subsequent moral behavior.

Now imagine that the waitress had not noticed your generous tipping behavior, because she was distracted by another customer the moment you dropped your money into the tip jar. Would you still feel licensed to turn down her request?

Essentially, one could think that it makes no difference whether or not somebody recognized your prior generous behavior. After all, you know what you did and this should be sufficient to assure yourself that you are of good character. However, there is empirical evidence showing that people actually need to be recognized by others in order to establish and affirm their identity through their actions (Gollwitzer, 1986; Gollwitzer, Sheeran, Michalski, & Seifert, 2009; Wicklund & Gollwitzer, 1981). If others fail to recognize previous identity-relevant actions, people show an increased striving for similar actions subsequently which would be the

opposite of moral balancing (Gollwitzer, 1986; Gollwitzer, et al., 2009; Wicklund & Gollwitzer, 1981).

In this paper we investigate whether people in fact show an increased moral striving when they were not recognized for their prior moral actions. More specifically, the aim of this paper is to explicitly compare the influence of past moral behavior and non-moral behavior on future moral striving under conditions with social recognition and without social recognition.

We define a behavior as moral when it involves giving up personal benefits to provide benefits for others, the environment or society as a whole. This is consistent with Schwartz's (1992) conception of self-transcendence and Haidt's (2008) conception of morality as a set of values or practices for regulating selfishness and enabling a cooperative social life. Accordingly, we define a behavior as non-moral when it involves not giving up personal benefits but is rather self-serving.

We derive our hypotheses from self-perception theory (Gollwitzer, 1986; Gollwitzer, et al., 2009; Wicklund & Gollwitzer, 1981) according to which social recognition allows people to derive a sense of progress or goal attainment from their goal congruent actions which in turn moderates future goal striving. The potential influence of social recognition in moral balancing effects has been discussed by some authors (Jordan, Mullen, & Murnighan, 2011; Merritt, et al., 2010; Monin & Miller, 2001) but has rarely been tested empirically (see Monin & Miller, 2001 for an exception). If social recognition is indeed an influence on moral balancing, this would shed a new light on potential boundary conditions for moral balancing effects and underscore the view that moral balancing effects can be conceptualized as a dynamic of goal regulation.

Moral Balancing in the Context of Self-Completion Theory

In general, people have a strong tendency to define themselves as moral individuals and seek confirmation for this belief (Aquino & Reed, 2002; Dunning, 2007). However, when their past moral behavior reflects positively on their self-perception and thus confirms their moral character, people tend to show less future moral striving. This phenomenon, termed moral licensing or balancing has been replicated multiple times in various contexts (Merritt, et al., 2010). For instance, Jordan and colleagues (2011) found that participants who recalled a moral action from their past showed less pro-social intentions afterwards compared to a control group that recalled a neutral or an immoral action. In a similar vein, Zhong and colleagues (2010) found that buying sustainable products licensed people to be less generous subsequently compared to buying conventional products. In sum, it seems that there are different ways through which people can establish a positive self-perception that serves as a moral license. Thus, sustainable consumption and unselfish deeds can be considered as moral behaviors, and both behaviors seem to have similar effects on subsequent moral striving. What appears to be important for the occurrence of moral balancing effects is that the behavior people exhibit in the past is a symbolically meaningful indicator of their moral selves.

In fact, this is exactly what symbolic self-completion theory predicts (Gollwitzer, 1986; Gollwitzer, et al., 2009; Wicklund & Gollwitzer, 1981). According to this theory, people conceptualize facets of their own identity as personal goals. People then use a wide array of activities that reflect on their personal goals to build their identity, a process called symbolic self-completion. For instance, people could exhibit a certain behavior that reflects their identity goals in order to achieve a state of self-completion. Alternatively, they could display material symbols congruent with such goals or simply describe themselves as a person possessing the identity

(Gollwitzer, 1986; Wicklund & Gollwitzer, 1981). In any case, self-completion theory predicts that successfully enacting symbolic activities leads to a reduced subsequent striving for congruent activities. The reason for this is that people derive a sense of progress or goal achievement from successful symbolic activities which in turn leads to reduced tension and striving for similar goal congruent activities (Wicklund & Gollwitzer, 1981) as found in moral balancing effects. Therefore, it is not surprising that the theoretical mechanism outlined by self-completion theory has been used to explain moral balancing effects (Jordan, et al., 2011).

Moreover, other theories used to explain moral balancing describe the mechanism behind the effect in very similar terms as self-completion theory. For instance, self-regulation theory (Zhong, et al., 2009) also speaks of a reduced tension in goal striving due to prior moral achievement, referring to the goal regulation literature (Fishbach & Dhar, 2005).

However, one important element of self-completion theory has not been addressed thoroughly in the moral balancing literature. A central postulate of self-completion theory states that people can only derive a sense of progress or goal attainment from their symbolic activities when these activities are recognized by others (Gollwitzer, 1986; Wicklund & Gollwitzer, 1981). Essentially, this means that when people are not recognized by others, they lack a sense of progress because what they did 'does not become a social fact' (Gollwitzer, 1986, p. 144). The reason for this is that, according to self-completion theory, identity construction is always situated in a social context and can only even emerge in relation to others. Thus, the symbolic impact of a given activity on an individual's self-construction is dependent on the activity being recognized by others (Gollwitzer, 1986; Wicklund & Gollwitzer, 1981) which is why people continue striving for an identity goal if their previous activity is unrecognized. Importantly, the process described by self-completion theory has little to do with impression management, i.e.

self-completion effects are not driven by strategic concerns to impress others (Gollwitzer, 1986). Consequently, for self-completion to occur, the mere presence of any audience is more important than its actual nature (Gollwitzer, 1986; Wicklund & Gollwitzer, 1981). In support of these assumptions, Gollwitzer and colleagues (Gollwitzer, 1986; Gollwitzer, et al., 2009; Wicklund & Gollwitzer, 1981) present experimental evidence that self-relevant activities recognized by various audiences can discourage subsequent goal striving. For instance, one study showed that women who want to become mothers exhibited weaker striving to express their good mother skills when another participant had already noticed their skills before (Gollwitzer, 1986, study 1). In a different series of studies, it was shown that university students performed weaker on tasks relevant to their study subject if the experimenter had recognized their performance intentions beforehand (Gollwitzer, et al., 2009).

In sum, self-completion theory emphasizes the role of social recognition and its influence on subsequent striving for identity goals. It predicts that goal striving is discouraged when prior identity-relevant behavior was recognized, but encouraged if prior identity-relevant behavior was not recognized by others.

Research on social recognition in moral balancing

Despite the fact that self-completion theory clearly points to the potential influence of social recognition on moral balancing effects, empirical research on this issue is scarce. Jordan and colleagues (2011, p. 10) discuss the possibility that moral balancing effects might be influenced by social recognition, but finally conclude that 'private reflections on one's past behavior may be enough to produce ... compensatory effects'. However, the authors also state that their data do not allow testing this assumption explicitly and therefore advocate that further research is needed. In a similar vein, Monin and Miller (2001, p. 39) argue that 'it is not critical

that others know of one's credentials for them to have a licensing (balancing) effect'. However, the authors' conclusion was meant to imply only that moral balancing effects are not driven by participants' self-presentational concerns. In support of this assumption, they ran an experiment designed to test if people show moral balancing because they want to impress the experimenter. Specifically, Monin and Miller (2001) compared two experimental conditions. In one experimental condition, participants' past moral behavior was witnessed by experimenter A but the dependent variable measuring moral intentions was witnessed by a different experimenter B. In a second experimental condition, participants' past moral behavior and subsequent moral intentions were witnessed by the same experimenter. The authors found that in both experimental conditions participants exhibited a moral balancing effect, showing lower moral intentions compared to a control condition that did not engage in previous moral behavior. This implies that the moral balancing effect is not based on strategic efforts to impress one experimenter. However, it does not imply that social recognition did not play a role. After all, participants' behavior in both experimental conditions was recognized by some audience and self-completion theory explicitly argues that the nature of the audience does not matter much (Gollwitzer, 1986; Wicklund & Gollwitzer, 1981) as long as there is any audience present. In order to exclude the influence of social recognition, one would need an experiment in which participant's behavior in one group was clearly not recognized by anyone.

The current research

In order to provide a more compelling test for the influence of social recognition in moral balancing, we designed a paradigm that combines a moral balancing manipulation with a social-recognition manipulation typically used in self-completion theory paradigms.

Applying the logic of self-completion theory to the moral balancing paradigm, it follows that the balancing effect should only hold if people are recognized for what they did. Being recognized leads to successful self-completion and allows people to derive a sense of progress or goal attainment from their past behavior. Accordingly, recognized past moral behavior as opposed to non-moral behavior should lead to a sense of moral progress and discourage subsequent moral striving (hypothesis 1). If, however, past behavior is not recognized by others the balancing effect should turn into its opposite which would result in a moral highlighting effect. We use the term highlighting in accordance with Fishbach (2009) to indicate that a prior behavior encourages more congruent subsequent behavior. After all, attempts for self-completion fail if people are not recognized for what they did, and hence they are left with a perception of lacking progress. A perceived lack of progress encourages people to further strive for congruent goals (Brunstein & Gollwitzer, 1996; Fishbach & Dhar, 2005; Gollwitzer, Wicklund, & Hilton, 1982; Koo & Fishbach, 2008). Accordingly, unrecognized past moral behavior as opposed to non-moral behavior should lead to a perceived lack of moral progress which in turn encourages more subsequent moral striving (hypothesis 2).

In order to test for these predictions, we designed two experiments in which moral or non-moral behavior was either socially recognized or not. In line with self-completion theory (Gollwitzer, 1986; Gollwitzer, et al., 2009; Wicklund & Gollwitzer, 1981) we assume that people use different symbolic activities in order to achieve a more general state of moral self-completion. For instance, buying sustainable products or lending support to another person can both serve as a symbol for being a moral person, because they both involve giving up own resources for others, the environment or society as a whole. In experiment 1, participants were either recognized or not when buying sustainable or conventional products from a store. Prior

research suggests that buying sustainable goods reflects on a person's moral self-perception and that the specific consumption task used in our experiment is suitable for influencing people's subsequent moral striving (Mazar & Zhong, 2010). In experiment 2, participants were either recognized or not when endorsing unselfish or self-serving ways to improve life at university.

STUDY 1

Method

Participants

We invited 174 students (97 female) from a German university to participate in a lab study on decision making. The mean age of the sample was 23.11 years. Participants were randomly assigned to one of four conditions in a 2 (recognition: with social recognition, without social recognition) x 2 (consumption: sustainable, conventional) design. The study was conducted in groups of 2-4 participants, conditions were held constant within each group. Participants received a lottery ticket to win a 15 € product basket with a 1/5 chance as compensation. After the study, participants received information on a debriefing provided through the department's homepage.

Procedure

Upon arrival in the lab, participants were welcomed and asked to sit in individual cubicles with computers. All further instructions appeared on screen. First, participants were invited to spend 15€ in an online store and told that 1 out of 5 people would be randomly selected to actually receive their chosen products after the experiment. This shopping task served as the moral vs. non-moral behavior manipulation. Following a procedure adapted from Mazar and Zhong (2010), participants either chose from a store that contained 9 sustainable products

and 3 conventional products (sustainable condition) or from a store that contained 3 sustainable products and 9 conventional products (conventional condition).

Second, participants were asked to copy their product selection to an order sheet.

Following a procedure inspired by Gollwitzer et al. (2009), participants in the conditions with social recognition were then asked to hand their order sheet over to the experimenter in an adjacent room. The experimenter went through the sheet and read out loud the chosen products, presumably to confirm that the order sheet was filled out properly. Participants in the conditions without social recognition were asked to place their order sheet into an envelope, seal it, and drop it into a black box by the door. They were also told that their order was not handled by the experimenter but treated anonymously by external personnel.

Third, we asked participants to answer some filler questions on product colors and product packaging for several minutes. Then, we introduced them to a second, ostensibly unrelated study in which they elaborated on their lives during the next three months. Specifically, inspired by a procedure from Jordan, Mullen, and Murnighan (2011), we asked participants to rate the likelihood of engaging in 23 various day-to-day activities, including 10 different activities that involve giving up personal resources for the benefit of others or the environment (examples: 'engaging in volunteer work', 'separating waste', ...). In order to build a moral intentions scale, we submitted these 10 items to a principal component analysis with varimax rotation. The scree-plot clearly suggested a unidimensional solution with only the following five items loading onto one moral intentions factor (eigenvalue = 1.9; loadings ranging from .48-.70): 'engaging in volunteer work', 'helping friends to move their apartment', 'separating waste', 'being mindful about energy and water use', 'disposing returnable bottles instead of returning them' (reversed scored). We therefore aggregated these items to a moral intentions scale

(Cronbach α = .51). The remaining items did not load on this factor and did not show any factorial structure themselves.

Finally, participants completed a series of exploratory questionnaires unrelated to this study, including questions about a hypothetical money allocation and product related emotions. Participants also provided some socio demographic information and were asked to evaluate the shopping task at the beginning of the study. Specifically, we asked participants to think back to the product task and evaluate on a 5-point scale (1 = rather no, 5 = rather yes) whether 'the ordering procedure of the products had been anonymous' and whether they thought that 'the experimenter had noticed their product selection'. Both items were aggregated (with the 'anonymous' item reversed) to a social recognition score (Cronbach α = .80). To measure the effectiveness of our consumption manipulation we counted the number of sustainable products participants had chosen.

Results

Analyses of participants' shopping behavior confirmed that individuals in the sustainable conditions selected significantly more sustainable products (M = 3.94, SD = 1.19) than participants in the conventional conditions (M = 0.93, SD = 0.95; t(172) = 18.50, p < .01 one-tailed, d = 2.80). Also in line with the manipulation, participants in the conditions with social recognition perceived their product selection to be recognized to a higher extent (M = 3.27, SD = 1.46) than participants in the conditions without social recognition (M = 1.41, SD = 0.61; t(172) = 10.96, p < .01 one-tailed, d = 1.66).

To test our hypotheses that social recognition promotes a dynamic of moral balancing while a lack of social recognition promotes a dynamic of moral highlighting, we conducted a 2 (consumption: sustainable, conventional) x 2 (recognition: with social recognition, without social

recognition) ANOVA using the moral intentions scale as a dependent measure. In line with our hypotheses, we found no main effect of consumption ($F(1, 170) = 0.31, p = .58, \eta_p^2 = .002$) or recognition ($F(1, 170) = 1.89, p = .17, \eta_p^2 = .01$) but a significant interaction effect ($F(1, 170) = 10.64, p < .01, \eta_p^2 = .06$). Planned contrasts showed that with social recognition, participants in the sustainable condition exhibited lower subsequent moral intentions (M = 4.34, SD = 0.89) than participants in the conventional condition (M = 4.69, SD = 0.76, p < .01 onetailed, d = 0.42), consistent with a moral balancing effect. Conversely, without social recognition, participants in the sustainable condition exhibited higher subsequent moral intentions (M = 4.59, SD = 0.79) than participants in the conventional condition (M = 4.09, SD = 0.99, p = .03 onetailed, d = 0.56), consistent with a moral highlighting effect.

Table 1 about here

In Study 1, we found support for our hypotheses that recognized past moral behavior discourages future moral striving while unrecognized past moral behavior encourages future moral striving. However, study 1 had a couple of limitations. First, we relied on the assumption that sustainable consumption is perceived as a moral behavior. Although this is generally supported by the literature (Hopper & Nielsen, 1991; Mazar & Zhong, 2010), it could be that at least some of our participants selected sustainable products for reasons unrelated to morality. Second, our dependent measure was somewhat limited as it only involved behavioral intentions and showed low internal consistency. In order to address these issues, in study 2 we employed a different manipulation of moral vs. non-moral behavior and a dependent measure assessing participants' actual helping behavior.

STUDY 2

Method

Participants

We invited one hundred eighty students (90 female) from a German university to participate in a lab study. The mean age of the sample was 22.96 years. Participants were randomly assigned to one of four conditions in a 2 (recognition: with social recognition, without social recognition) x 2 (behavior: unselfish, self-serving) design. The study was conducted in groups of 2-6 participants, and conditions were held constant within each group. Participants received 3 € as compensation. Debriefing information was provided through the department's homepage.

Procedure

Upon arrival in the lab, participants were welcomed and asked to sit in individual cubicles. We handed out booklets that contained all further instructions. First, participants were invited to participate in an endorsement task that served as the moral vs. non-moral behavior manipulation. Specifically, we told participants that we were collecting ideas about how to improve students' everyday lives at the university. To this end, we were running an opinion poll in which every participant was invited to choose six measures that he or she considers personally important and therefore wanted to endorse. Following the logic of the shopping task from Mazar and Zhong (2010), participants in the unselfish condition received a ballot sheet containing nine clearly unselfish and three clearly self-serving measures, while participants in the self-serving condition received a ballot sheet containing three clearly unselfish and nine clearly self-serving measures to endorse. The unselfish measures were selected after a pretest (n = 41), in which we had tested 30 different possible engagements in terms of perceived self-servingness and

perceived unselfishness. For example, one item included into the main study was 'I endorse reserving computer working spaces specifically for people with disabilities in the following area of the campus ________. Participants were asked to mark the items they wanted to endorse and to fill in the blanks with their suggestions. The self-serving options were developed in parallel to the unselfish statements, but phrased in a way that people would be able to apply the information in a self-serving way. For instance, in the self-serving condition the above statement would read 'I endorse reserving computer working spaces specifically for people of my faculty _____. Participants were asked to mark the items they wanted to endorse and to fill in the blanks with their suggestions. Thus, only the framing of the statements, but not their actual content differed across conditions.

Second, similar to study 1, participants in the conditions with social recognition were asked to hand their booklet and voting sheet over to the experimenter in an adjacent room after they had made their choice. The experimenter went through the voting sheet and read out loud the endorsed options ostensibly to confirm that the sheet was filled out properly. Participants in the conditions without social recognition were asked to tear their voting sheet out of their booklet, place it into an envelope, seal it, and drop it into a black box by the door. They were told that their vote was not handled by the experimenter but treated anonymously by external personnel.

Third, we introduced participants to the second part of the study on leisure time activities. The purpose of this part was to engage participants in a series of filler tasks and to collect potential control variables for our dependent measure of helping behavior. First, participants indicated their preferences for several pictures showing leisure time activities. Then, we asked them to fill out a questionnaire on how they generally use their leisure time using a scale ranging

from 0 ('not at all') to 6 ('absolutely'). The questionnaire contained 3 items assessing attitudes towards rigid time planning (example item: 'I tend to make fixed plans for my leisure time that I do not like to give up'; Cronbach $\alpha = .70$) inspired by Bühler et al's (2010) rigid goal orientation scale, 6 items assessing attitudes towards volunteering (example item: 'Volunteering is a worthwhile use of my time even if I do not get paid'; Cronbach $\alpha = .88$) adapted from DeVoe and Pfeffer (2007), and some items on preferred leisure time activities.

After participants had finished these questionnaires, they learned that the remaining part of the study would only last about 3-4 more minutes. We then asked them if they would be willing to help us out with an additional task after having finished the study. This helping request was attached to their booklet. Specifically, we asked participants if they were willing to help us develop study materials necessary for a different study on performance (see Gino & Desai, 2012; Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007 for similar tasks). The task involved solving computational puzzles and evaluating their difficulty on a scale. Each puzzle was solved by finding 2 numbers adding up to 10 in a table of 12 numbers. Participants found an example of a puzzle in their booklet and were asked to let the experimenter know how many puzzles they would be willing to solve and evaluate, knowing that the maximum amount they could choose was 50. It was emphasized that any number of puzzles would be a valuable contribution. However, it was also emphasized that participants would be compensated independently as promised for their participation in the current study, regardless of whether they engaged in any additional work. When participants approached the experimenter, they were given an extra booklet containing the puzzles to work on after the study was over. Our dependent measure was the number of puzzles solved by each participant.

Finally, before participants started to work on the puzzles, we asked them to complete a small post study questionnaire. The post study questionnaire included questions concerning socio demographic information and participants' evaluations of the endorsement task at the beginning of the study. Specifically, participants were asked to think back to the endorsement task and to answer four questions concerning the perceived unselfishness of their behavior ('did you think you were endorsing measures that benefit other people's everyday life but not your own'; 'did you think you were endorsing measures that benefit disadvantaged people'; 'did you think you were endorsing measures that benefit your personal everyday life in the first place; 'did you think you were endorsing measures that you personally benefit from') and two items concerning social recognition of their behavior ('did you think that the voting was completely anonymous'; 'did you think that the experimenter has noticed what measures you endorsed') on a seven point scale (1 = do not agree, 7 = fully agree). The perceived unselfishness items were aggregated (with negative items reversed) to an unselfishness score (Cronbach $\alpha = .81$). In a similar vein, the social recognition items were aggregated (with the 'anonymous' item reversed) to a social recognition score (Cronbach $\alpha = .78$).

Results

One participant left the experiment after without completing the dependent variable or the manipulation check measures. One additional participant did not complete the manipulation check measures.

Analyses of the perceived unselfishness scores confirmed that participants in the unselfish conditions perceived their behavior as more unselfish (M = 3.82, SD = 1.36) than participants in the self-serving conditions (M = 3.08, SD = 1.13; t(176) = 3.95, p < .01 one-tailed, d = 0.59). Also, participants in the conditions with social recognition perceived their behavior to

be recognized to a higher extent (M = 3.36, SD = 1.93) than participants in the conditions without social recognition (M = 0.54, SD = 1.10; t(176) = 12.00, p < .01 one-tailed, d = 1.80).

In order to test our main hypothesis, that social recognition promotes a dynamic of moral balancing while a lack of social recognition promotes a dynamic of moral highlighting, we conducted a 2 (behavior: unselfish, self-serving) x 2 (recognition: with social recognition, without social recognition) ANOVA using the number of puzzles solved as a dependent measure. In line with our hypotheses, we found no main effect of behavior (F (1, 175) = 0.48, p = 0.49, η_p^2 = .003) or recognition (F (1, 175) = 0.20, p = .66, η_p^2 = .001) but a marginally significant interaction effect (F (1, 175) = 3.51, p = .06, η_p^2 = .02). Since the distribution of our dependent measure violated the normality assumption, we also conducted a non-parametric test of the interaction effect, using adjusted rank transformed scores as suggested by Leys and Schumann (2010). The test confirmed our results (F (1, 175) = 4.62, p = .03, η_p^2 = .03).

To test the pattern of the interaction effect we conducted planned contrasts as well as non-parametric U-tests. The planned contrasts showed that without social recognition, participants in the unselfish condition solved more puzzles (M = 10.81, SD = 12.90) than participants in the self-serving conditions (M = 6.54, SD = 11.22, p = .04 onetailed, d = 0.35) consistent with a moral highlighting effect. With social recognition, participants in the unselfish conditions by trend solved less puzzles (M = 6.96, SD = 9.75) than participants in the self-serving conditions (M = 8.93, SD = 10.53, p = .20 onetailed, d = 0.19). Although not significant, this pattern is consistent with a moral balancing dynamic. Additional non-parametric U-tests corroborated these results, showing a significant highlighting effect in conditions without social recognition (U(90) = 783, z = -1.97, p = .02 onetailed) and a non-significant balancing-trend in conditions with social recognition (U(89) = 832, z = -1.35, p = .09 onetailed).

In order to control for the influence of participants' a priori attitudes towards rigid time use as well as their attitudes towards volunteering, we ran an additional ANOVA with both attitude measures as covariates. Our rationale was that participants who are generally opposed to adjusting their time schedule according to unexpected requests or opposed to volunteering would be less likely to engage in helping behavior. Controlling for attitudes, the interaction effect remained stable and was even slightly enhanced ($F(1, 173) = 3.99, p = .047, \eta_p^2 = .02$).

Table 2 about here

In study 2, we were able to partly replicate the interaction effect found in study 1 in a different study design, measuring actual helping behavior. Specifically, the pattern of results found in conditions without social recognition was consistent with the results found in study 1. Under conditions with social recognition we did not replicate the pattern found in study 1, but found a similar trend.

GENERAL DISCUSSION

Across two studies, we found evidence that whether or not past moral behavior is socially recognized influences future moral striving. Specifically, we found that without social recognition, past moral behavior leads to increased moral striving compared to past non-moral behavior. This moral highlighting effect was found significant in study 1, where people first engaged in sustainable or conventional shopping and then indicated their future moral intentions. We also replicated this effect in study 2, where people first endorsed unselfish or self-serving ways to improve university life and were then offered an opportunity to help the experimenter with an extra task. On the other hand, we found some evidence that with social recognition, past moral behavior leads to decreased moral striving compared to past non-moral behavior. This moral balancing effect was found significant in study 1 which measured moral intentions; in

study 2, which involved actual helping behavior, we found a similar pattern in our data despite not reaching significance.

One limitation of our data is that the internal consistency of our dependent measure used in study 1 is rather low. However, the factorial analysis provides an empirical basis for the unidimensionality of our scale which, according to Schmitt (1996), is a more important criteria than internal consistency. Additionally, the level of consistency matches that of similar behavioral intention measures in the literature (Fishbach & Dhar, 2005; Jordan, et al., 2011).

In sum, the pattern of results found across both studies is in line with self-completion theory (Gollwitzer, 1986; Gollwitzer, et al., 2009; Wicklund & Gollwitzer, 1981) and its assumption that people need to be recognized by others to establish and affirm their identity through their actions. In particular, it seems that a lack of social recognition does not allow people to successfully achieve a state of self-completion and in turn triggers further striving such as higher moral intentions or willingness to help the experimenter. On the other hand, at least in our data, successfully achieving self-completion through social recognition did not always discourage further striving. One reason why this effect was less reliable could be the individual differences in reactions to social recognition. Thus, for individuals strongly motivated to conform to others, social recognition might not only promote a feeling of goal achievement but also entail a higher perceived accountability (Lerner & Tetlock, 1999). This, in turn could promote behavioral consistency and thus counteract a moral balancing effect. In a similar vein, individuals motivated to impress others may also show behavioral consistency in the light of social recognition, because social recognition establishes incentives for costly signaling (Griskevicius, Tybur, & Van den Bergh, 2010; Miller, 2007). Future studies should therefore investigate potential moderating effects of individual differences in regards to social recognition. With respect to other research in the literature, our data replicates previous findings on moral balancing to some extent (Conway & Peetz, 2012; Jordan, et al., 2011; Khan & Dhar, 2006; Monin & Miller, 2001; Sachdeva, Iliev, & Medin, 2009; Zhong, et al., 2009). Other studies have found moral balancing effects when no precautions were taken to prevent social recognition. This is consistent with the impression that participants in laboratory studies generally operate under the assumption that experimenters do take note of their behavior, unless they are told otherwise. After all, the entire purpose of conducting experiments is to observe and collect data from participants. Seen from this perspective, it appears that most experiments do involve some degree of social recognition and therefore involve conditions similar to our conditions with social recognition.

Importantly, however, our data also shows that preventing social recognition encourages people to keep on striving, leading to a pattern of moral highlighting. This extends prior research and points to a potential boundary condition of moral balancing effects. It also underscores the fact that moral balancing effects can be conceptualized as a dynamic of goal regulation. After all, self-completion theory (Gollwitzer, 1986; Gollwitzer, et al., 1982) in contrast to alternative theories on moral balancing (Effron & Monin, 2010; Monin & Miller, 2001; Sachdeva, et al., 2009) makes clear predictions about the effects of social recognition that we observed in our study. Also, the processes of goal striving and detachment described by self-completion theory (Gollwitzer, 1986; Gollwitzer, et al., 1982) appear very similar to the processes described in at least some licensing theories (Zhong, et al., 2009) as well as self regulation theories in more general terms (Fishbach & Dhar, 2005; Fishbach, et al., 2009; Koo & Fishbach, 2008). Despite the fact that our results can be best explained as a dynamic of goal regulation, they do not necessarily contradict alternative models on moral balancing. For instance, in one alternative

model, the moral credit model (Merritt, et al., 2010; Sachdeva, et al., 2009), it is assumed that past moral behavior establishes a credit that could be spent subsequently to justify more self-serving behavior (Merritt, et al., 2010). Given our study results, one could argue that social recognition is a boundary condition that enables people to build up moral credit through their actions. If this boundary condition is not met, people who engaged in moral behavior experience a state of sunk cost, because they tried to build up credit but did not succeed.

In sum, it seems that whether or not the waitress takes notice of your tipping behavior may indeed matter. To underscore this point, consider the following anecdote from the US sitcom Seinfeld: In the 130th episode, George Costanza, one of the series' main characters, makes a dramatic move to recapture his tip money from the tip jar in which he had just thrown it. The reason why George is making such a fool out of himself, and possibly risking his reputation as good customer is simple: nobody took notice when George threw in his money in the first place so he wants to gain that social recognition for his kindness and throw it in again.

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Table 1

Moral Intentions by Consumption (sustainable vs. conventional) and Recognition (with social recognition vs. without social recognition)

	With Social Recognition			Without Social Recognition			
_	M	SD	n	M	SD	n	
Sustainable	4.34	0.89	43	4.59	0.79	44	
Conventional	4.69	0.76	43	4.09	0.99	44	

Note: moral intentions range from 1 (low) to 6 (high).

Table 2

Puzzles solved by Behavior (unselfish vs. self-serving) and Recognition (with social recognition vs. without social recognition)

	With Social Recognition			Without Social Recognition			
	M	SD	n	M	SD	n	
Unselfish	6.96	9.75	44	10.81	12.90	45	
Self-Serving	8.93	10.53	44	6.54	11.22	46	

Note: puzzles solved ranges from 0 to 50.

ARTICLE 2

A matter of perspective – Why Past Moral Behavior can Discourage and Encourage Future

Moral Behavior.

(current status: 'revise and resubmit' at the Journal of Applied Social Psychology)

A matter of perspective – why past moral behavior can discourage and encourage future moral behavior.

Moritz Susewind, Erik Hoelzl

Department of Economic and Social Psychology, University of Cologne, Germany.

Author Note

We thank Gari Walkowitz for contributing to the development of the brainstorm task used in study 2. We also thank Maria Klees and Katrin Dietsch for data collection and Filippo Cordaro for helpful comments. Correspondence concerning this article should be addressed to Moritz Susewind, Department of Economic and Social Psychology, University of Cologne, Albertus-Magnus-Platz, 50923 Cologne, Germany, E-mail: moritz.susewind@uni-koeln.de

A MATTER OF PERSPECTIVE

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Abstract

In this paper we investigate the role of different perspectives people take on their past

moral behavior in order to explain why past moral behavior sometimes discourages and other

times encourages future moral striving. Across two experiments we show that when people

focus on progress towards personal goals, past moral behavior leads to less future moral

striving compared to past non-moral behavior. However, when people focus on commitment

towards personal goals, past moral behavior leads to more future moral striving compared to

past non-moral behavior. Our results integrate seemingly contradictive empirical evidence

from past research, relying on the overarching theoretical framework of goal regulation

theory. It therefore contributes to broadening the scope of current theories on moral decision

making that account for moral balancing but not moral highlighting.

Keywords: moral licensing, self-regulation, goals

A matter of perspective – why past moral behavior can discourage and encourage future moral behavior.

Imagine an old woman asks you to help her cross the street. You take her arm and bring her to the other side safely. Now, how do you see yourself? Imagine that shortly afterwards you are addressed by a fundraiser and asked to give money to a good cause. Would you care to support it?

Most psychological theories imply that the answer to the first question – how people see themselves – is relatively simple. In general, different theories predict that people will have a more positive self-perception after engaging in moral behavior (Bem, 1972; Festinger & Carlsmith, 1959; Gollwitzer, 1986; Khan & Dhar, 2006; Monin & Miller, 2001; Zhong, Liljenguist, & Cain, 2009).

The answer to the second question – how people behave in a subsequent situation – is less simple. While some research has demonstrated that people show increased moral behavior after prior moral engagement (Burger & Caldwell, 2003; Cornelissen, Dewitte, Warlop, & Vincent, 2007; Cornelissen, Pandelaere, Warlop, & Dewitte, 2008; Freedman & Fraser, 1966) other research has shown the exact opposite, i.e. that people show less moral behavior after prior moral engagement (Jordan, Mullen, & Murnighan, 2011; Khan & Dhar, 2006; Monin & Miller, 2001).

In this paper, we investigate this puzzling pattern. More specifically, we investigate the role of different perspectives people take on their past moral behavior and how these perspectives influence their future moral engagement. By showing that people can derive positive self-perceptions from different perspectives, our paper contributes to understanding why a positive self-perception sometimes discourages future moral behavior and other times encourages it.

Behavioral Consistency and Inconsistency in Moral Behavior

Given that past behavior is an indicator of a person's stable attitude or commitment towards something, it is reasonable to assume that people show a degree of consistency between their past and future behaviors (Festinger & Carlsmith, 1959). This should be especially true for behaviors that strongly reflect a person's values, such as moral behavior.

We define a behavior as moral when it involves giving up personal benefits to provide benefits for others, the environment or society as a whole. This is consistent with Schwartz's (1992) conception of self-transcendence and Haidt's (2008) conception of morality as a set of values or practices for regulating selfishness and enabling a cooperative social life.

Accordingly, we define a behavior as non-moral when it involves not giving up personal benefits but is rather self-serving.

In line with the assumption that past behavior indicates stable attitudes or commitments, research shows that people who bought organic rather than conventional products in the past also show higher purchase intentions for organic products in the future (Dean, Raats, & Shepherd, 2012). Also, positive attitudes towards organic products predict future buying intentions (Dean, Raats, & Shepherd, 2008). Moreover, Cornelissen and colleagues (2008) found that people who were made aware of their own frequently performed sustainable behaviors in the past made more sustainable choices in subsequent decisions compared to participants who had focused on less frequent sustainable behaviors or nonsustainable behaviors in the past. According to the authors, the assumed mechanism behind the effect is that focusing on more frequent and therefore more diagnostic sustainable behaviors allows people to update their own self-perception in terms of their attitudes towards sustainability which in turn leads to more sustainable decisions. Interestingly, a very similar reasoning has been proposed to explain the foot-in-the-door effect (Burger & Caldwell, 2003; Freedman & Fraser, 1966) which is another example of behavioral consistency in moral behavior. The foot-in-the-door-effect describes the phenomenon that people who agreed to a

small request in a previous situation are more likely to agree to a larger request in a subsequent situation. In one study, Burger and Caldwell (2003) showed that participants who received one dollar as compensation for their initial request were less likely to agree to a subsequent larger request than participants who received a positive feedback to their initial request labeling them as 'someone who cares about people in need'. The authors also showed that differences in behavioral compliance were mediated by differences in self-perceptions, i.e. the extent to which people perceived themselves as someone who provides support for worthy causes. Thus, similar to Cornelissen et al. (2008) the authors advocate that participants learned about their own positive attitude when their prior behavior was diagnostic of this attitude, which in turn led them to behave consistently.

In stark contrast to these results demonstrating behavioral consistency, other research has shown that people act inconsistently with their past moral behavior when they perceive the behavior as reflecting positively on themselves but are not encouraged to attribute it to a stable attitude or commitment (Jordan, et al., 2011; Khan & Dhar, 2006; Monin & Miller, 2001). Thus, it was shown in a number of publications that people who behave morally in one situation show less moral behavior or even immoral behavior in a subsequent situation, an effect called moral licensing (see Merritt, Effron, & Monin, 2010 for a review). For instance, Jordan and colleagues (2011) found that participants who recalled a past moral action showed less pro-social intentions afterwards compared to a control group that recalled a neutral or an immoral action. In a second study, participants who recalled a past moral action were more likely to cheat on a math task compared to people who recalled a past immoral action. Interestingly, the assumed mechanism behind these effects also involves an update of people's self-perceptions. Thus, Khan and Dhar (2006) provide some evidence that a more positive self-perception is mediating the licensing effect. In one study, the authors show that people who imagine volunteering for a good cause perceive themselves as more sympathetic, warm, and helpful. In turn, this mediates their subsequent intention to buy a frivolous luxury product.

In addition, there is some indirect evidence showing that the moral licensing effect vanishes when people cannot attribute their prior moral behavior to their own intrinsic motivations (Khan & Dhar, 2006; Monin & Miller, 2001). This implies that the extent to which a behavior reflects positively on a person's self is an important precursor of moral licensing. However, it does not imply that people learn about a stable attitude or trait they possess. Accordingly, theoretical models of the moral licensing effect do not propose self-perception changes in terms of stable attitudes or commitments, but rather emphasize that past moral behavior provides people with a feeling of moral self-completion, e.g. the perception that they have accomplished progress towards their moral identity ideal (Jordan, et al., 2011). Having achieved this state of moral progress subsequently allows people to act less morally (see also Zhong, et al., 2009 for a similar account).

In sum, there is sound evidence that past moral behavior can discourage but also encourage future moral behavior. In both cases, changes in self-perception play an important role. However, it also seems that behavioral consistency was found when researchers enabled participants to acquire knowledge about the nature of a stable attitude or commitment to a moral cause. Thus in one study, participants were explicitly labeled as 'someone who cares about people in need' (Burger & Caldwell, 2003) while in other studies participants were focused on repeatedly performed behaviors which could also be indicative of a person's commitment (Cornelissen, et al., 2008). On the other hand, behavioral inconsistency was found when researchers did not encourage participants to attribute their past behavior to a stable attitude or commitment. In these cases, participants seem to have acquired knowledge about their moral progress or achievement, which is a different kind of change in self-perception. Thus, in a typical licensing study, participants reflect on or engage in a single moral behavior without being labeled with or focused on stable attitudes or commitments (Jordan, et al., 2011; Khan & Dhar, 2006; Monin & Miller, 2001). Not focusing on attitudes

obviously leaves people to interpret their behavior more in terms of achievement than in terms of commitment to a moral cause.

Hence, it seems that the two streams of literature described are implicitly driven by two different perspectives that people take when observing their past moral behavior. The goal of our paper is to integrate these two perspectives into a single paradigm.

Progress vs Commitment Perspective

The idea that people take different perspectives on their past self-relevant actions resides prominently in the literature on human goal striving. Thus, theory on human goal regulation (see Fishbach, Zhang, & Koo, 2009 for a review) argues that one type of selfrelevant information people can infer from their past behavior is information about their goals. Importantly, the same behavior can convey two very different kinds of goal information, e.g. people can learn about their self-relevant goals from two different perspectives. When people are not focused on goals (Fishbach, Dhar, & Zhang, 2006) or focused on goal progress (Fishbach & Dhar, 2005), past behavior informs them about their goal accomplishment. Learning about personal goal accomplishment is positive feedback that leads to less goal congruent behavior in subsequent situations, which is a dynamic of goal balancing. After all, having accomplished one goal means that motivational resources can be directed toward other goals that are also important to the individual (Fishbach, et al., 2009). However, when people are focused on goal commitment, past behavior informs them about whether a personal goal is valuable to them. Learning about the value of a personal goal is positive feedback that leads to more goal congruent behavior in subsequent situations, which is a dynamic of goal highlighting. In this case, motivational resources are not directed toward other goals but rather stay on the focal goal. Empirical evidence for the influence of perspective on goal congruent behavior comes from studies in which people are induced to reflect on their past goal relevant behaviors as indicative of either progress or commitment. In one study, participants reflected on their current body weight and were induced to perceive

either more or less progress towards having achieved their ideal weight by indicating the difference between their ideal and their current weight on a wide or narrow scale (Fishbach & Dhar, 2005, study 1). Participants who were led to perceive high progress more often chose a parting gift incongruent with the goal of weight loss (a chocolate bar), while participants in low progress condition more often chose a parting gift congruent with the goal of weight loss (an apple). In another study (Fishbach & Dhar, 2005, study 3), university students were asked to reflect on their past behavioral performance in certain personally relevant areas such as studying, by either rating their level of perceived progress or their level of perceived commitment to the associated goal. Results showed that students who reflected on their past behavior in terms of progress showed higher intentions to engage in goal incongruent behavior compared to those who reflected on their past behavior in terms of commitment.

In a recent review paper, Merrit and Colleagues (2010) argued that framing behavior in terms of a progress or commitment perspective could be moderating moral balancing effects. However, until today there is no empirical prove of this idea. Applying the rationale of perspectives to the moral domain, we assume that different perspectives people take on their past moral behavior or non-moral behavior leads to different kinds of self-perceptions which in turn yield different courses of future moral action.

Essentially, we hypothesize that when people are not focused on goals or focused on goal-progress, past moral behavior leads to less future moral striving than past non-moral behavior (moral balancing). However, when people are on goal commitment past moral behavior leads to more future moral striving than past non-moral (moral highlighting).

To test these predictions, we conducted two experiments in which people first engage in moral or non-moral behavior and then reflect on this behavior taking different perspectives.

STUDY 1

Method

Two hundred forty three undergraduates from a German university (142 women, 101 men; mean age = 23.5) were approached on campus and invited to a lab experiment on decision-making. Participants were randomly assigned to conditions in a 2 (consumption: sustainable, conventional) x 3 (perspective: unfocused, progress-focused, commitment-focused) between subject design (n = 38-45). First, participants were invited to spend €15 choosing their preferred products from an online store and told that 1 out of 5 people would be randomly selected to actually receive their chosen products. This shopping task served as the moral vs. non-moral behavior manipulation. Following a procedure adapted from Mazar and Zhong (2010), participants either chose from a store that contained 9 sustainable products and 3 conventional products (sustainable condition) or from a store that contained 3 sustainable products and 9 conventional products (conventional condition). Prior studies have established that sustainable consumption is one facet of moral behavior (Hopper & Nielsen, 1991) and reflects positively on a person's a moral self-perception (Mazar & Zhong, 2010).

Next, participants in the unfocused conditions engaged in a calculation task, adding up product prices similar to the ones they had seen during their shopping before. Inspired by a procedure from Fishbach and Dhar (2005), participants in the progress-focused conditions were asked to reflect on their prior shopping behavior and rated the degree to which they felt they had come closer towards certain personal goals and had made progress towards those goals (1 = not at all, 6 = very much). Specifically, participants rated one goal they named themselves, three utility goals ('quality', 'usefulness', 'congruency with personal requirements') that served as filler items, and three sustainable goals ('environmental standards', 'free of polluting additives', 'fair production standards') on closeness and goal progress. The three sustainable goals were aggregated to form a goal-progress score ($\alpha = .90$). Participants in the commitment -focused conditions reflected on the same goals but rated the

degree to which they had felt committed to them and how important they had been (1 = not at all, 6 = very much) to their shopping decisions. Their ratings on the three sustainable goals were aggregated into a goal-commitment score (α = .91).

Afterwards, participants were introduced to a second, ostensibly unrelated study in which they elaborated on their life during the next three months. Specifically, they rated the likelihood of engaging in various day-to-day activities (1 = very unlikely, 6 = very likely). Inspired by a procedure from Jordan, Mullen, and Murnighan (2011), we dispersed 6 different prosocial behaviors in a list of 23 activities: ('donating money to a charity', 'engaging in volunteer work', 'lying for personal benefits' (reverse scored), 'giving money to a homeless person', 'helping friends to move their apartment', 'donating blood'). In order to build a prosocial intentions scale and maximize its consistency, we excluded one item that suffered from strong ceiling effects ('blood donation'). The remaining 5 items showed a consistency of $\alpha = .50$.

Results

Analyses of participants' shopping behavior showed that individuals in the sustainable conditions selected significantly more sustainable products (M = 3.84, SD = 1.10) than participants in the conventional conditions (M = 1.08, SD = 1.03; t(241) = 20.13, p < .01 one-tailed, d = 2.59). Analyses of the goal ratings showed that participants in the sustainable progress conditions perceived significantly more progress towards sustainable goals (M = 3.71, SD = 1.18) than participants in the conventional progress condition (M = 3.07, SD = 1.10; t(82) = 2.60, p < .01 one-tailed, d = 0.56). Also, participants in the sustainable commitment condition perceived significantly more commitment towards sustainable goals (M = 3.73, SD = 1.26) than participants in the conventional commitment condition (M = 3.05, SD = 1.21; t(81) = 2.49, p = .01 one-tailed, d = .55).

To test our hypothesis that focusing on goal progress or not focusing on goals at all leads to moral balancing while focusing on goal commitment leads to moral highlighting, we

conducted a 2(consumption: sustainable, conventional) x 3(perspective: unfocused, progress-focused, commitment-focused) ANOVA using the prosocial intentions scale as a dependent measure. In line with our hypothesis, we found no main effect of consumption (F (5, 237) = 0.69, p = .41, η_p^2 = .003) or perspective (F (5, 237) = 0.72, p = .49, η_p^2 = .006) but a significant interaction effect (F (5, 237) = 3.04, p < .05, η_p^2 = .03). Post hoc simple tests showed that in the progress-focused conditions, participants exhibited prosocial intentions in line with a moral balancing effect, t(81) = 1.79, p = .038 one-tailed, d =.38, with lower intentions in the sustainable condition (M = 3.77, SD = .88) compared to the conventional condition (M = 4.10, SD = .84). Conversely, in commitment-focused conditions, participants exhibited intentions in line with a moral highlighting effect t(81) = 1.68, p = .048 one-tailed, d =.37, with higher intentions in the sustainable condition (M = 3.95, SD = .82) compared to the conventional condition (M = 3.67, SD = .69). In the unfocused conditions, results were in line with a moral balancing pattern, with lower intentions in the sustainable condition (M = 3.67, SD = .83) compared to the conventional condition (M = 3.89, SD = 1.04) however the effect was not significant overall, t(74) = 1.02, p = .15 one-tailed, d =.23.

Table 1 about here

STUDY 2

In study 1, we showed that focusing on goal progress leads to moral balancing while focusing on goal commitment leads to moral highlighting. However, we did not observe actual behavior. Thus, it may be possible that people exhibit behavioral intentions in line with our hypothesis but do not actually show this behavior in a situation where it has actual consequences. Furthermore, in study 1 we relied on the assumption that sustainable consumption is perceived as a moral behavior, which is generally supported by the literature (Hopper & Nielsen, 1991; Mazar & Zhong, 2010) but may not be the case for all our participants.

In study 2 we address these issues, employing a validated manipulation of moral vs. non-moral behavior and a dependent measure of actual incentivized behavior.

Method

At a German university, 130 students (71 female, 59 male; mean age = 23.8) participated in a lab study. We assigned participants randomly to one of four conditions in a 2 (behavior: unselfish, self-serving) x 2 (perspective: progress-focus, commitment-focus) design (n = 30-35). First, we invited participants to take part in a 'brainstorm task' that served as a moral behavior manipulation. The general idea of this task was that half of our participants dedicated their efforts to a topic that is clearly focused on helping others while the other half dedicated their efforts to a topic that is primarily focused on helping themselves. We invited all our participants to spend 7 minutes of their time developing ideas on how to improve student life. To induce a sense of personal responsibility, all participants could choose between two superficially different topics to work on: 'student life at campus' or 'day to day student living'. After the choice, we provided all participants with a detailed description of their chosen topic as well as their non-chosen topic. Irrespective of their chosen topic, participants were randomly assigned to either an unselfish condition or a self-serving condition. In the unselfish condition, participants chosen topic description was as follows: 'imagine you are a personal coach and develop ideas on how one could improve a disabled student's life at campus [day to day living]'. In a pretest (n = 41) on 30 possible engagements, improving a disabled student's life ranked as the lowest in self-servingness (M = .73, SD =1.23) and highest in unselfishness (M = 3.90, SD = 1.51). In the self-serving condition, participants chosen topic was described as follows: 'imagine you are assigned a personal coach and develop ideas on how one could improve your own personal life at campus [day to day living]'. To ensure comparability, we asked all participants to work on their tasks in three consecutive steps, answering open questions about 1) possible needs, 2) possible measures to address those needs, and 3) likely consequences resulting from those measures. To ensure

task-involvement, we made arrangements to forward all ideas to a well-known student organization and informed participants about this.

Next, we invited participants to reflect on their behavior in the brainstorm task. In the progress condition, we asked participants to evaluate whether they felt they had made progress concerning the goal to 'help others' and the goal to 'help themselves'. To indicate goal progress, participants used two sliding scales (range: 1-100) on which they moved a blue box labeled 'I' closer towards another blue box labeled 'GOAL to help others' or 'GOAL to help myself'. Participants in the commitment conditions were asked whether they felt they had been committed to these goals and moved a blue box labeled 'GOAL to help others' or 'GOAL to help myself' closer to a blue box labeled 'I' to indicate their commitment. In general, the task was designed to help participants visualize the discrepancy between selfish and unselfish goal progress or goal commitment.

Next, we told participants that the first part of the study was over and introduced a second part in which we asked them to engage in an interpersonal interaction task designed to measure generosity. Specifically, we asked participants to divide the amount of $6 \in \text{between}$ themselves and another participant of the study that was randomly assigned to them, knowing that the other participant has to accept their decision. Participants were assured anonymity and asked to create a number code to ensure anonymous payoff before making their decision. Also, participants were told that at the end of the study, a lottery would decide whether their own decision is executed or they have to accept the decision of another participant.

Finally, we asked participants to complete a series of questionnaires not relevant to this paper, to provide some socio demographic information and gave them the opportunity to leave any comments on the study in general.

Results

Four participants were excluded from the analysis because they failed to complete the brainstorm task, not working on one or several of the three steps. Excluding these participants did not change the significance of the hypothesized interaction effect.

Analysis of the goal ratings showed that participants in the unselfish progress condition perceived significantly more progress towards helping others (M = 76.22, SD = 24.13) than towards helping themselves (M = 23.56, SD = 25.97), t(31) = 7.21, p < .01, one-tailed, d = 2.10), while participants in the self-serving condition perceived marginally less goal progress towards helping others (M = 68.53, SD = 26.37) than helping themselves (M = 77.07, SD = 22.43), t(29) = 1.40, p = .08 one-tailed, d = 0.35). A similar pattern showed in the commitment conditions, with participants in the unselfish commitment condition indicating significantly more commitment to helping others (M = 65.32, SD = 38.72) than helping themselves (M = 23.24, SD = 28.31), t(33) = 5.04, p < .01 one-tailed, d = 1.24) and participants in the self-serving commitment condition indicating significantly less commitment to helping others (M = 56.07, SD = 23.29) than helping themselves (M = 70.17, SD = 24.89), t(29) = 2.31, t(29) = 2.31

To test our hypothesis that focusing on goal progress leads to moral balancing while focusing on goal commitment leads to moral highlighting, we conducted a 2 (behavior: moral, non-moral) x 2 (perspective: progress, commitment) ANOVA with generosity, i.e. the amount of money given as dependent measure. In line with our predictions, the analysis showed no main effects of behavior (F(3,122) = .01, p = .91, $\eta_p^2 = .01$) or perspective (F(3,122) = .14, p = .71, $\eta_p^2 = .01$) but a significant interaction effect (F(3,122) = 5.68, p = .02, $\eta_p^2 = .04$). This interaction effect was robust after controlling for the topic participants selected themselves. Post hoc simple tests confirmed that participants who perceived their behavior in terms of progress showed a moral balancing effect, offering less money in the unselfish condition (M = 1.86, SD = 1.29) than in the self-serving condition (M = 2.43, SD = 1.36), t(60) = 1.71, p = 1.86, t(60) = 1.71, t(60

.046 one-tailed, d =0.43). In contrast, participants who perceived their behavior in terms of commitment showed a moral highlighting effect, offering more money in the unselfish condition (M = 2.32, SD = 1.29) than in the selfish condition (M = 1.80, SD = 1.22; t(62) = 1.66, p = .051 one-tailed, d =0.41).

Table 2 about here

GENERAL DISCUSSION

Across two studies that use different study designs, we found evidence that when people are focused on goal-progress, past moral behavior leads to less future moral striving than past non-moral behavior (moral balancing). On the other hand, when people are focused on goal-commitment, past moral behavior leads to more future moral striving than past non-moral behavior (moral highlighting). While study 1 shows the effect on prosocial intentions, study 2 shows the effect on actual generosity. In contrast to our expectations, we did not find a balancing effect in the control condition in study 1, where people neither focused on progress nor commitment. A possible reason for this could be that the control condition did not involve any reflection on goals. Therefore, participants did not attribute their prior behavior to themselves as much as in the other conditions. Attributing one's behavior to the self is crucial for both moral balancing (Khan & Dhar, 2006; Monin & Miller, 2001) and highlighting effects (Burger & Caldwell, 2003; Cornelissen, et al., 2008) to occur.

In sum, our results demonstrate that the same moral behavior can convey very different self-relevant information and can lead to opposing courses of future moral action. This clearly emphasizes that there are different processes at work, depending on the perspective that people adopt. To date, theories on moral decision making (Jordan, et al., 2011; Khan & Dhar, 2006; Monin & Miller, 2001; Zhong, et al., 2009) have mostly addressed the dynamic of moral balancing and made little effort to integrate relevant findings on moral highlighting, existent in the literature (Burger & Caldwell, 2003; Cornelissen, et al., 2007; Cornelissen, et al., 2008; Freedman & Fraser, 1966). Our paper contributes to overcoming this

neglect, by applying the broader perspective of goal regulation theory (Fishbach, et al., 2009). It thereby adds to a recently emerging literature on moderators of moral balancing effects (Conway & Peetz, 2012; Effron & Monin, 2010; Gneezy, Imas, Brown, Nelson, & Norton, 2012). For instance, Gneezy and Collegues (2012) showed that past moral behavior that entails costs for the individual leads to lower subsequent moral transgressions than past moral behavior that did not entail costs. They also show that this effect is mediated by moral-selfperception. In addition, Conway and Peetz (2012) showed that whether people remember a past moral behavior in a concrete vs. abstract way also influences their future moral striving. In their studies recalling moral behavior in an abstract way promoted moral highlighting, while recalling moral behavior in a concrete way promoted moral balancing. Both these articles are very much in line with the results of our own studies. Thus, enduring costs may serve as another indicator of commitment towards the behavior in question which in turn encourages further moral striving. On the other hand, recalling moral behavior in an abstract way may also lead people to construe their behavior in terms of commitment whereas recalling it in a concrete way may promote a perspective of progress (Fishbach, et al., 2006). Overall it seems that goal regulation theory provides a framework to more explicitly spell out the implicit assumptions that have been driving research on moral licensing and moral highlighting effects in the past. It is therefore useful to broaden the scope of other theoretical models discussed in the literature (Jordan, et al., 2011; Khan & Dhar, 2006; Monin & Miller, 2001; Zhong, et al., 2009).

Future research should investigate the long-term stability of moral balancing and highlighting patterns, going beyond single situational effects. Given that the commitment perspective promotes changes in stable attitudes, one could assume that these changes persist over time. On the other hand, people's original attitudes towards moral issues acquired beforehand could exert an even stronger influence likely diminishing the highlighting effect over time and making people fall back into a balancing dynamic.

From an applied point of view, our results can contribute in several important ways. First, knowing about the importance of perspective and moral motivation could help to increase participation in public good efforts. For instance, when collecting money for a good cause, fundraisers could start out by engaging people in a conversation about their prior commitment to similar activities. Remembering one's own past commitment could raise the perceived value of relevant goals and thereby increase the likelihood of donation or participation. Another application of our results could be to design marketing strategies for sustainable products using commitment rather than a progress framing. Thus, marketing sustainable consumption as an issue of personal commitment to a good cause could lead to higher customer loyalty towards those products. In turn, this may prevent people from only occasionally buying their share of green to balance out their conventional consumption habits.

After all, our research demonstrates that it takes only a small change in perspective to turn a potentially negative dynamic of licensing into a positive dynamic of moral highlighting.

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Table 1

Prosocial Intentions by Consumption (sustainable vs. conventional) and Perspective (progress vs. commitment vs. control) in Study 1

	Progress			Cor	Commitment			Control		
-	M	SD	n	M	SD	n	M	SD	n	
Sustainable	3.77	0.88	41	3.95	0.82	45	3.67	0.83	38	
Conventional	4.10	0.84	43	3.67	0.69	38	3.89	1.04	38	

Note: prosocial intentions range from 1 (low) to 6 (high).

Table 2
Generosity by Behavior (moral vs. non-moral) and Perspective (progress vs. commitment) in
Study 2

	P	rogress		Co	Commitment			
	M	SD	n	M	SD	n		
Moral	1.86	1.29	32	2.32	1.29	34		
Non-moral	2.43	1.36	30	1.80	1.22	30		

Note: generosity was measured as amount of ϵ given to other participant (range 0-6).

ARTICLE 3

Feel the Moral Weight on Your Shoulders – How Material Objects are Experienced as

Heavier or Lighter through Moral Meaning

(current status: under review at Journal of Experimental Social Psychology)

Feel the Moral Weight on Your Shoulders – How Material Objects are Experienced as Heavier or Lighter through Moral Meaning

Moritz Susewind, Fabian Christandl, Erik Hoelzl

Department of Economic and Social Psychology, University of Cologne, Germany.

Author Note

We thank Theresa Stangl, Ilknur Aydogdu, Indra Büld, Jan Lück, Birgit Riebisch, Svea Krell, Michaela Rüb and Michael Blens for data collection and Filippo Cordaro for helpful comments. Correspondence concerning this article should be addressed to Moritz Susewind, Department of Economic and Social Psychology, University of Cologne, Albertus-Magnus-Platz, 50923 Cologne, Germany, E-mail: moritz.susewind@uni-koeln.de, Tel: +49 (0) 221 470 7974, Fax: +49 (0) 221 / 470 - 5175

Abstract

In this paper we integrate theories on moral contamination with a metaphor-enriched perspective. We show evidence across three studies that people rely on the concept of weight to grasp the meaning and implications of moral objects. Specifically, in Study 1 we demonstrate what we term the 'moral weight effect' by showing that moral products are experienced as lighter while immoral products are experienced as heavier. We also show that people try to avoid immoral products but approach moral products. In Study 2 we replicate the moral weight effect with a different study design and exclude alternative explanations for it. In Study 3 we show that the experienced weight of an immoral or moral product predicts whether people want to avoid or approach the product subsequently. These results support the idea that weight is used as an intuitive indicator of the morality of an object.

Keywords: conceptual metaphor; moral contamination; guilt; elevation; embodied cognition

Feel the Moral Weight on Your Shoulders – How Material Objects are Experienced as Heavier or Lighter through Moral Meaning

Immoral behavior is often described as a burden or load that people put on their shoulders, whereas moral behavior is often described as uplifting and elevating (Haidt, 2003a). It seems that the concept of weight is used to conceive the meaning of morality. This is in line with conceptual metaphor theory, which claims that people grasp the meaning of complex and abstract social concepts with the help of more concrete and intuitive concepts (Lakoff & Johnson, 1980; Landau, Meier, & Keefer, 2010). In fact, the metaphorical connection between morality and weight seems to be widespread across cultures. For instance, the Bible speaks of sin as 'a great weight' (Psalm 38.4, Lutheranian translation, 1984) and the Quran says that 'whoever earns a fault ... has indeed burdened himself with falsehood' (Chapter 4, Vers 112, Hilali & Khan Translation, 1999). Also in the hinduistic jain religion, the human soul can be burdened with sinful karmas and sink under the weight, but it can also become lighter and rise through humbleness (Saraswati, 1999).

Interestingly, a growing body of literature shows that people do not only conceive of moral behavior as a burden or elevation (Haidt, 2003a, 2003b) – they also experience objects that are associated with such behavior as if they were literally charged with morality (Belk, 1988, 1991; Haidt, 2003a; Nemeroff & Rozin, 1994; Rozin, Millman, & Nemeroff, 1986). For instance, Haidt (2003a) suggests that people try to avoid contact with objects that belong to an evil person, because those objects are perceived as burdening or contaminating in a negative way. On the other hand, people seek contact to objects that belong to a saint because these objects are perceived as elevating and contaminating in a positive way.

In this paper, we propose that conceptual metaphor theory (Landau, et al., 2010) can shed some light on the processes behind moral contamination. Specifically, we assume that

people use the concept of weight to grasp the implications of using or owning a moral object. Therefore, people experience material objects of identical weight as heavier when they have an immoral meaning as compared to a moral meaning. This experienced weight is an intuitive indicator of an object's morality, i.e. its capacity to morally contaminate or burden people. It can therefore predict whether people want to approach or avoid the object.

The moral weight of objects

According to the moral contamination framework, people hold the superstitious belief that objects with a moral meaning can affect a person that comes into contact with these objects (Haidt, 2003a; Nemeroff & Rozin, 1994; Rozin, et al., 1986). More specifically, researchers argue that there is a psychological mechanism through which some of the properties of the moral object symbolically transfer to the person (Nemeroff & Rozin, 1994; Rozin, et al., 1986). As a consequence, immoral objects repel people via negative contamination and moral objects attract people via positive contamination (Belk, 1988, 1991; Haidt, 2003a).

The specifics of the psychological process behind moral contamination have remained unclear for the most part. For instance, Nemeroff and Rozin (1994) show in one study that people expect less enjoyment from wearing a sweatshirt that belonged to an evil person compared to a sweatshirt that belonged to a virtuous person. However, the authors do not clarify the mechanism of how the perception of the sweatshirt changes through its moral meaning. Other researchers do not state a specific process either (Haidt, 2003a) or just describe the effect in rather broad terms as a 'symbolic interaction' (Belk, 1988). In short, it seems that the phenomenon is not easy to grasp.

Interestingly, people in everyday life often suffer from a similar problem as researchers. They are often confronted with complex social concepts or phenomena that are not easy to grasp. According to conceptual metaphor theory, people then rely on concrete, intuitive concepts to make sense of a more abstract concept in order to better understand its

meaning and implications (Lakoff & Johnson, 1980; Landau, et al., 2010). For instance, researchers have shown that people rely on the concept of verticality in order to grasp the meaning of divinity (Meier, Hauser, Robinson, Friesen, & Schjeldahl, 2007; Sanna, Chang, Miceli, & Lundberg, 2011). Thus, in one study participants ascribed individuals a stronger belief in God when their picture was presented in a higher position rather than a lower one (Meier, Hauser, et al., 2007). The authors reason that the intuitive concept of verticality helps people to better understand and conceptualize the abstract social meanings and implications of divinity.

Although the original conceptual metaphor theory (Lakoff & Johnson, 1980) suggested only a one-way influence from concrete, intuitive concepts to abstract concepts, Landau et al. (2010) and Barsalou (2008) have argued that the conceptual link also works the other way around. Empirical support for this alternative link comes from research showing that social proximity (abstract concept) leads to experiences of higher room temperature (concrete concept; Ijzerman & Semin, 2010; Zhong & Leonardelli, 2008) or research showing that positive words (abstract concept) are perceived as brighter (concrete concept) than negative words (Meier, Robinson, Crawford, & Ahlvers, 2007). These examples also demonstrate that the metaphoric influence of abstract concepts on intuitive perception extends to real sensory experiences, i.e. changes in abstract meaning can promote changes in sensory perceptions (Barsalou, 2008).

In this paper we propose that conceptual metaphor theory (Landau, et al., 2010) offers a pathway for investigating the process behind moral contamination. After all, the moral contamination framework argues that material objects are experienced and treated differently because of their moral meaning (Belk, 1988, 1991; Haidt, 2003a; Nemeroff & Rozin, 1994; Rozin, et al., 1986). In line with conceptual metaphor theory, we assume that the concept of weight is used in the context of morality because it captures the quality and vividness of the emotional consequences that follow from immoral and moral behavior. Thus, past research

shows that metaphors are employed to capture the vividness of affective states (Ortony & Fainsilber, 1989). In the case of moral transgressions, affective states include feelings of guilt, pride or elevation (Tangney, Stuewig, & Mashek, 2007). Anecdotal evidence shows that weight metaphors are used to describe such states. For instance, people talk about guilt as an emotional baggage or burden that someone carries. Also, a common expression for clearing ones consciousness is to get something of one's chest, to alleviate or relieve oneself. When committing a crime, people are *charged* with a felony and when people are absolved from a crime they are discharged from their their debt. In sum, there is clear evidence for the use of weight metaphors in the context of morality in everyday language but also classic religious works (see above). In addition, Kouchaki, Gino, and Jami (2012) have found direct empirical evidence that physical weight is related to guilt and moral behavior. More specifically, they found that participants who wore a heavy backpack experienced higher levels of guilt, cheated less and judged other people's unethical behaviors as more unethical compared to participants who wore a light backpack. This research basically shows the influence of the concrete concept of weight on the more abstract concept of morality. Based on the notion that the conceptual link between concrete and abstract concepts can also be reversed (Barsalou, 2008; Landau, et al., 2010), we assume that changing the moral meaning of an object can change experiences of the objects weight. This would mean that people physically experience the potential burden or elevation of a morally charged object. We therefore hypothesize that people experience an object charged with immoral meaning as heavier and an object charged with moral meaning as lighter (Hypothesis 1). We call this the moral weight effect. Essentially, we assume that object weight serves as an intuitive indicator of the morality of an object.

To further validate the morality-weight link, we also investigate if weight differences caused by moral meaning predict how people treat the object subsequently. Thus we hypothesize that experienced weight predicts behavioral tendencies in line with moral

contamination such as a desire to approach or avoid the object (Hypothesis 2). If supported, this would validate our assumption that weight is an intuitive indicator of the morality of an object.

STUDY 1

In Study 1, we investigated whether an immoral product is experienced as heavier than a moral product (Hypothesis 1). We also included a questionnaire about consumption behavior in regards to the product to test whether experienced weight can predict behavioral tendencies to approach or avoid it (Hypothesis 2).

Method

Participants. At a German university, 54 students (39 female; mean age = 22.5) participated in an experiment in front of the university cafeteria.

Procedure. We invited participants individually to a table in the corner of the room and assigned them randomly to one of two conditions. In the moral condition, we gave participants a chocolate bar with a fair trade seal on it (see Picture 1) and a short description of the production conditions of fair trade raw chocolate. The description emphasized how the fair trade agreement (TransFair, 2011) provides more economic freedom for cocoa farmers and, among other things, prevents them from selling their own children to richer families out of economic pressure, which is a common practice in cocoa producing regions (Secretariat of the Sahel and West Africa Club/ OECD, 2009). In the immoral condition, we gave participants the same chocolate bar as in the moral condition, but concealed its fair trade seal with a bar-code sticker. Also, the description of its production conditions emphasized the economic pressures of cocoa farmers and how they are forced to sell their children to richer families (child trafficking). We then asked participants to indicate the degree to which they considered the production conditions to be wrong, negative, desirable or positive (1 = do not agree, 7 = fully agree). We aggregated all items (with "desirable" and "positive" recoded) to form an index for perceived immorality, $\alpha = .97$. Then, we asked participants to evaluate the

product itself on several dimensions. Specifically, we invited them to take the product in their hands and evaluate its weight in grams on a scale with 5 gram steps, ranging from 5-100. In order to disguise weight as a variable of interest, we also asked participants to evaluate the product on dimensions other than weight, such as quality of the product and its ingredients.

Picture 1 about here

Afterwards, we asked participants about their consumption behavior, with the goal to measure their intentions to approach or avoid the product. Participants were asked to assume they could consume the product, and to evaluate whether they would 'enjoy consuming the product' or 'not enjoy consuming the product'. Preceded by some filler items on further product characteristics, participants were asked to assume they could keep the product, and to evaluate whether they would 'hold on to the product to consume it at a later point in time', 'try to get rid of the product', 'be disappointed if they lost the product', 'be relieved if they lost the product', 'give the product away to a person they like', give the product away to a person they dislike' (all items 1 = do not agree, 7 = fully agree). Our reasoning was that approach or avoidance of the product is a behavioral reaction to moral contamination. Thus, we aggregated all items (with approach items recoded) to an avoidance-index ($\alpha = .80$), with higher values indicating a greater desire to avoid the product. Finally, we asked participants to provide some personal information and to guess our hypothesis before we debriefed them.

Results

Participants in the immoral condition perceived the production conditions as more immoral (M = 5.87, SD = 1.02) than participants in the moral condition (M = 1.63, SD = 0.64), t(52) = 18.24, p < .001, d = 4.98. These results indicate that the experimental manipulation was successful.

In line with Hypothesis 1, participants in the immoral condition experienced the product as heavier (M = 41.67, SD = 20.52) than participants in the moral condition (M = 41.67, SD = 20.52) than participants in the moral condition (M = 41.67).

31.48, SD = 13.29), t(52) = 2.17, p = .02 one-tailed, d = 0.59. These results show the hypothesized moral weight effect.

At least partly in line with Hypothesis 2, participants in the immoral condition showed stronger intentions to avoid the product (M = 3.77, SD = 0.94) than participants in the moral condition (M = 2.70, SD = 0.75), t(52) = 4.65, p < .001, d = 1.27. However, in contrast to our assumption, weight judgments did not correlate with avoidance intentions, r(54) = .03, p = .84. An in-depth analysis of our data showed that one reason why our prediction failed could be ceiling effects produced by the strong manipulation. Thus, in some items of our avoidance index such as 'disappointed in case of loss' or 'get rid of the product' more than 60 % of the participants scored 1 or 7. With a limited variance like this it is highly unlikely to detect a correlation even if it exists. Another reason why our prediction failed could be the weight measurement. A close-ended scale is not a very intuitive way to assess product weight. The presentation of response alternatives provides a frame of reference that can seriously influence judgment, especially in estimates that cannot be retrieved from memory (Schwarz, 1999). We therefore used an open format to assess weight in the following studies. Finally, a conceptual problem of study 1 is that there could be alternative explanations for the moral weight effect.

STUDY 2

In Study 2 we sought to replicate the moral weight effect found in Study 1 with a different design in order to rule out alternative explanations. One alternative explanation for the weight effect found in study 1 could be that participants evaluated morally negative information as more relevant or important as compared to morally positive information. In turn, these skewed evaluations could have influenced the answers. After all, other research has established a conceptual link between weight and importance (Chandler, Reinhard, & Schwarz, in press; Jostmann, Lakens, & Schubert, 2009; Schneider, Rutjens, Jostmann, & Lakens, 2011). For instance, Schneider et al. (2011) found that the importance of information

alone can influence experienced object weight. To rule out this explanation, we included a neutral condition in our second study, in which participants received relatively unimportant information with no ethical implication. If weight experiences were only driven by relevance of information, participants in the neutral condition should experience their object as lighter than participants in both the moral and the immoral conditions. If, however, weight experiences were driven by the object's morality, scores in the neutral condition should range between the scores in the immoral and the moral condition because the neutral information is neither moral nor immoral. We also asked our participants to evaluate the relevance of the information they received.

A second alternative explanation for the moral weight effect in study 1 could be related to perceptions of products as being healthy or unhealthy. In a recent paper on health halo effects, Schuldt et al. (2012) argued that fair trade information can influence people's judgment of the amount of calories contained in a food product, making fair trade products appear healthier. Assuming that fewer calories may induce people to perceive a product as physically lighter, this could possibly explain the weight effect found in study 1. To rule out this explanation, we used a non-food product in the second study. If we were able to replicate the moral weight effect with a non-food product, it could not plausibly be caused by healthiness perceptions. Finally, one could argue that differences in the experienced weight of objects emerged because of differences in the participants' current mood due to the morality manipulation or due to a mere semantic association between weight and morality. In other words, thinking about an object as immoral could make people think that an object is heavier, but they do not actually feel the heaviness. To exclude these two alternative explanations, we ran a control condition in study 2 in which participants were exposed to the same moral information as in our experimental group, but received a product that was unrelated to this information. Instead, these participants were asked to imagine the product had been related to the received information. If the moral weight effect was based on current mood, merely

exposing people to moral information should influence their weight judgment. If the moral weight effect was based on a semantic association, merely imagining the product to be moral should influence weight judgments. Thus, differences in the control group could point to either of these alternative explanations.

Method

Participants. At a German university, 222 persons (179 female; mean age = 23.6) participated in a laboratory study concerning product evaluations. They were offered to receive a beach mat for their participation. We excluded one participant from the analysis, because he reported a product weight more than 6 standard deviations above the mean (1500 grams). Excluding this participant did not change the pattern of results.

Procedure. The study was conducted in groups of two to four, with each participant sitting in an individual cubicle. First, participants read a newspaper article that provided immoral, moral, or neutral information about a company. In the immoral condition, the company was reported to mistreat and exploit employees with disabilities, while claiming government funds for occupational integration. In the moral condition, the company was reported to make a special effort to integrate people with disabilities at full salary, and investing own resources into integration programs. In the neutral condition, the company's current status in terms of technical development and staff was reported. The article layout was a close replica of a regional German newspaper.

Second, we gave participants a beach mat (see Picture 1). In the experimental conditions, participants received a beach mat ostensibly from the company mentioned in the newspaper article, imprinted with a white logo of the company name. In the control conditions, participants received a beach mat without a company logo. These participants were asked to only imagine that the beach mat had been produced by the company mentioned in the newspaper article.

We then asked participants to evaluate how they felt about the company's behavior described in the newspaper article ("positively touched", "inspired", "repelled", "disgusted"; 1 = do not agree, 6 = fully agree). All items (with "positively touched" and "inspired" recoded) were averaged into an index for perceived immorality ($\alpha = .92$) that served as manipulation check. Participants also evaluated the relevance of the information they received ("relevant", "not very interesting", "relevant for buying products from this company"; 1 = do not agree, 6 = fully agree). All three items (with "not very interesting" recoded) were averaged into an index for perceived relevance ($\alpha = .76$).

Next, we asked participants to evaluate the product on several dimensions. Specifically, we asked them to take the product in their hands and estimate its weight in grams. We used an open format to assess product weight, because it provides a more intuitive, undistorted assessment compared to a scale. In order to disguise weight as a variable of interest we also asked participants to evaluate other product dimensions such as length of the beach mat and its color tone. Then, we asked them to complete a series of questionnaires not relevant to this study and to provide demographic information. Finally, participants were debriefed.

Results

The morality manipulation was successful, F(2, 218) = 507.41, p < .01, $\eta_p^2 = .82$. Compared to participants in the neutral condition (M = 2.96, SD = 0.84), participants in the immoral condition (M = 5.61, SD = 0.71) perceived the company's behavior as more immoral, while participants in the moral condition (M = 1.62, SD = 0.79) perceived it as less immoral. Post hoc Tukey tests showed all differences to be significant, ps < .01.

According to our reasoning, morality should only affect experienced weight in experimental conditions, but not control conditions. This was tested using a 3 (morality: immoral, neutral, moral) x 2 (groups: experimental, control) ANOVA with experienced product weight as the dependent measure. As expected, a significant interaction effect was

observed, F(2, 215) = 3.78, p = .02, $\eta_p^2 = .03$, but no main effects of morality, F(2, 215) = 0.38, p = .69, or groups, F(1, 215) = 0.53, p = .47. Detailed descriptives are shown in Table 1. Table 1 about here

The pattern of the interaction was in line with hypotheses. Planned contrasts showed that within the experimental group, participants in the immoral condition (M = 331.32, SD = 177.87) experienced the product as significantly heavier than participants in the neutral condition (M = 263.42, SD = 154.45), p = .05 one-tailed, d = 0.41, and the moral condition (M = 226.32, SD = 134.21), p < .01 one-tailed, d = 0.67. The difference between the moral and the neutral experimental condition did not reach significance (p = .19 one-tailed). Within the control condition no significant differences occurred (ps = .72 to .92). Nonparametric tests corroborated these results.

In order to rule out the argument that perceived relevance was driving the moral weight effect rather than perceived morality, we analyzed relevance ratings in our experimental conditions. Analysis of variance showed a significant main effect F(2, 111) = 74.58, p < .01, $\eta_p^2 = .57$. Tukey post-hoc tests showed that participants in the neutral condition perceived their received information as less relevant (M = 2.68, SD = 1.11) than participants in the immoral condition (M = 4.98, SD = .73, p < .01) and participants in the moral condition (M = 4.81, SD = .60, p < .01). Additionally, no significant difference between the moral and the immoral condition (p = .68) appeared. We also found that perceived relevance did not predict product weight in the experimental condition (p = .08, p = .40), whereas perceived immorality was a significant predictor of product weight (p = .22, p = .02). Thus, neither the pattern of perceived relevance nor its statistical relationship with product weight yielded any support for the alternative explanation that the moral weight effect was driven by perceived relevance of the moral information.

STUDY 3

In Study 2 we replicated the moral weight effect and excluded possible alternative explanations for it. In Study 3 we wanted to investigate if changes in the experienced weight of a moral object can indeed indicate its capacity for moral contamination (Hypothesis 2), keeping in mind the methodological issues encountered in our first study.

Method

Participants. We approached 58 students (39 female, mean age = 22.8) in front of the university cafeteria at a German university and invited them to a table in the corner of the room.

Procedure. We used a design that was similar to the one used in study 1 with two important modifications: First, we used the more intuitive open format to assess product weight in an undistorted manner. Second, we altered the manipulation used in study 1 to prevent ceiling effects in our second dependent variable. In order to make the manipulation less outrageous and more subtle, we gave participants a briefer description of the fair trade and unfair production conditions that did not contain the paragraph about child trafficking.

As for the remaining structure, we kept the design of study 1. After handing out the study materials we first asked people to evaluate the immorality of the production conditions ($\alpha = .96$), then asked them to evaluate the product's weight and finally asked them about their consumption behavior. The avoidance index showed an internal consistency of $\alpha = .73$.

Results

Participants in the immoral condition perceived the production conditions as more immoral (M = 5.48, SD = 1.21) than participants in the moral condition (M = 1.81, SD = 0.75), t(56) = 13.98, p < .01, d = 3.66.

In line with Hypothesis 1, participants in the immoral condition also experienced the product as heavier (M = 42.54, SD = 24.21) than participants in the moral condition (M = 42.54) than participants in the moral condition (M = 42.54).

30.57, SD = 22.44), t(56) = 1.95, p = .03, one-tailed, d = 0.51). A nonparametric test corroborated this result.

A closer look at the avoidance index revealed that the problem of bottom and ceiling effects persisted despite our efforts to reduce it. However, as in Study 1, it was mostly concentrated on two items ('disappointed in case of loss', 'get rid of product') where 70 % of participants scored only 1 or 7. Therefore we removed these items from our index. The index retained a good internal consistency of .70.

In line with hypothesis 2, participants in the immoral condition showed stronger intentions to avoid the product (M = 3.79, SD = 1.12) than participants in the moral condition (M = 3.09, SD = 0.93), t(56) = 2.57, p < .01 one-tailed, d = 0.68.

Hypothesis 2 stated that experienced weight can predict whether people show tendencies to avoid immoral objects and approach moral objects. This assumption was tested in a stepwise regression analysis, using weight to predict the desire to avoid the product, after controlling for the morality manipulation. A closer look at the results for step 2 in Table 2 indicates that, after controlling for morality, weight was found to be a significant predictor of the desire to avoid the product, $\beta = .29$, p = .02 one-tailed. It further shows that the coefficient of morality is reduced from $\beta = -.32$, p < .01 one-tailed, in step 1 to $\beta = -.25$, p = .03 one-tailed, in step 2. In order to formally test for mediation, a bootstrap test with 1000 resamples was conducted (Preacher & Hayes, 2008). The indirect effect was .0770 (95% confidence interval .2310 to .0089). These results indicate that weight is indeed an intuitive indicator of the morality of an object, as it partially mediates the effect of morality on avoidance. The bootstrap test as well as the above reported t-test remained significant even if we include the skewed items previously excluded.

Table 2 about here

GENERAL DISCUSSION

In three studies that used different designs, we obtained evidence that people rely on the concept of weight to grasp the meaning and implications of moral objects. We showed that this moral weight effect is based on actual sensory judgments of heaviness, as it only appeared when participants held an actual moral or immoral object in their hands. This speaks against alternative explanations such as mood or a mere semantic association between weight and morality. Additionally, due to the results of study 2 we can exclude the possibility that weight judgments were determined by participant's health perceptions concerning the product (Schuldt, et al., 2012).

We also excluded the possibility that perceived relevance alone could be responsible for the weight effect. Prior research from Schneider et al. (2011) has shown that calling a book 'important' made participants experience the book as heavier compared to control conditions where no importance information was given. In contrast, our studies show a pattern of results that is clearly inconsistent with a mere importance explanation. First, the pattern of participants' relevance judgments was not coherent with the pattern of participants' weight judgments, as in the most irrelevant condition (neutral) the product was not experienced as lightest. Second, perceived relevance did not correlate with experienced object weight, while perceived immorality did.

We did, however, find some evidence for a negativity bias, i.e. the more general principle that bad events often have a greater psychological impact than positive events (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Rozin & Royzman, 2001). Thus, in comparison with a neutral condition, the positive moral weight effect was weaker than the negative moral weight effect. This is in line with other research on a negativity bias in contamination effects (Rozin & Royzman, 2001) and speaks for the fact that, within the domain of morality, negative events can have more severe effects than positive events.

Our final result, that the experienced weight of a moral object partially mediates people's subsequent desire to avoid or approach the moral object, underscores the validity of the hypothesized moral-weight-link. It therefore supports our assumption that the morality of an object is conceptualized through the intuitive concept of weight.

Our results have important theoretical implications because they integrate theories on conceptual metaphors (Lakoff & Johnson, 1980; Landau, et al., 2010) and theories on moral contamination (Belk, 1988, 1991; Haidt, 2003b; Nemeroff & Rozin, 1994; Rozin, et al., 1986). Furthermore, our results contribute to a more complete picture of the metaphorical building blocks relevant in moral judgment and decision making. Past research has explored other concepts that are metaphorically related to morality, such as purity (Elliott & Radomsky, 2009; Lee & Schwarz, 2010; Ritter & Preston, 2011; Schnall, Haidt, Clore, & Jordan, 2008; Sherman & Clore, 2009; Zhong, Strejcek, & Sivanathan, 2010). We think that purity is an important concept to consider, because it relates to relevant emotional experiences such as moral disgust (Haidt, 2003a, 2003b). However, we are convinced that the concept of weight offers important new insights, because it relates to a different nature of emotional experience, i.e. to moral guilt, pride or elevation. Extending the array of metaphors by weight thus contributes to a deeper understanding of the processing of morality and opens up a new field of possible behavioral implications specifically related to the weight metaphor.

From a pragmatic perspective, our findings might point to a new research strategy in market research. Specifically, product weight could offer people a way to express their attitudes towards a product in ways that self-reports cannot. Researchers could formulate and test hypotheses on consumption patterns specifically related to product weight. As a starting point, our paper shows that, when products are concerned, people strive for the moral lift and try to avoid the moral weight on their shoulders.

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Table 1

Experienced product weight by groups (experimental vs. control) and morality (immoral vs. neutral vs. moral) in Study 2

	Immoral			Neutral			Moral		
	M	SD	n	M	SD	\overline{n}	M	SD	\overline{n}
Experimental	331.32	177.87	38	263.42	154.45	38	226.32	134.21	38
Control	263.59	223.11	37	288.97	195.21	34	321.81	195.41	36

Table 2
Summary of Regression Analysis for Morality and Weight Predicting Avoidance of Product

	Avoidance of product		
	ΔR^2	β	
Step 1 Morality	.10*	32**	
Step 2	.08*		
Morality		25*	
Weight		25* .29*	
	n < 05 ** n	< 01	

Note. n = 58. * p < .05, ** p < .01.

Picture 1
Products used in Study 1 and 3 (left) and Study 2 (right).



Note. Actual product weights: chocolate bar (left) 21 grams, beach-mat (right) 231 grams.

CURRICULUM VITAE

Persönliche Daten

Adresse: Holbeinstrasse 1, 50733 Köln

Telefon: 0171 5025205

Email: Moritz.Susewind@gmx.de

Nationalität: deutsch

Geburtsdatum: 24.01.1983

Ausbildung

Februar 2010 – aktuell **Doktoratsstudium,** *Institut für Wirtschafts*-

und Sozialpsychologie (Prof. Erik Hölzl), Universität zu Köln

Thema der Doktorarbeit: Subjective morality – Empirical studies on how

people balance their own interests with the interests of others and

experience moral meaning.

November 2003 – August 2009 **Psychologiestudium (Diplom)**, *Universität Trier*

Oktober 2006 – August 2007 **Psychologiestudium**, *Universität La Sapienza*, *Rom/Italien*

Dezember 2002 - Oktober 2003 **Zivildienst**, Deutsches Rotes Kreuz, Arnsberg

Juni 1993 – Juni 2002 Schüler, Gymnasium Laurentianum Arnsberg

Berufliche Erfahrungen

Februar 2010 – aktuell Mitarbeiter, Institut für Wirtschafts- und Sozialpsychologie

(Prof. Erik Hölzl), Universität zu Köln

 Leitung studentischer Gruppen zur Erforschung sozialpsychologischer Themenstellungen; Betreuung von studentischen Abschlussarbeiten.

- Planung und Durchführung empirischer Studien.
- Präsentation von Forschungsergebnissen auf internationalen Konferenzen; Publikation in internationalen Zeitschriften.
- Organisation und Moderation von Lehrveranstaltungen.

November 2007- März 2008

Verhaltenstrainer, Universität Trier

Entwicklung, Durchführung und Evaluation eines sozialen
 Kompetenztrainings für Bewerber im Alter von 17-21 Jahren

Juli 2007 - Oktober 2007

Praktikant und Co-Therapeut, Klinik Berus, Zentrum für

Psychosomatik und Verhaltensmedizin, Saarlouis

- Co-Therapeut in Gruppentherapien und Einzeltherapien
- Planung und Anleitung therapeutischer Übungen; Durchführung von Diagnostik und Entspannungsverfahren



April 2006 - August 2006	 Verhaltenstrainer, Jugendhilfe der Johanniter Trier Entwicklung und Leitung von sozialen Kompetenztrainings für Jugendliche im Alter von 9-14 Jahren
März 2004 - Januar 2005	Praktikant und Freier Mitarbeiter, Agentur für Kommunikation rheinfaktor, Köln • Verfassen von Pressemitteilungen und Produkttexten; Entwicklung von Claims; Konzeption eines Newsletters
Juni 2002 - September 2002	 Betreuer, Camp Timberridge, West-Virginia, USA Pädagogische Leitung von Kleingruppen zum Teil

Lehrerfahrung

Juni 2010 - current Anleitung und Organisation von Diplom- and Bacheloarbeiten:

Jahren

• 5 Gruppen von Diplomstudenten

erziehungsauffälliger Kinder im Alter von 8-10 bzw. 12-14

• 4 Gruppen von Bachelorstudenten

November 2010 / November 2011 Unterstützung und Organisation der Hauptseminare zum Thema

Emotionen und Entscheidungen, gemeinsam mit Prof. Erik Hölzl

Präsentationen

- Susewind, M., Metaphors as building blocks of moral judgment and decision making, Faculty of Economics and Business, Dept. of Marketing, Gent University, 16.03.2012 [Invited Talk]
- Susewind, M. & Hoelzl, E. (2011). Act responsibly or let yourself go? Effects of self-signaling through green consumption. SPUDM 23 Conference, London, UK, 21st 25th August 2011. [Poster Presentation]
- Susewind, M. & Hoelzl, E. (2011). When moral consumption makes people better or makes people worse opposing impacts of positive self-signals through consumption. IAREP/SABE/ICABEEP 2011 Conference, Exeter, UK, 12th 16th July 2011. [Talk]
- Susewind, M. & Hoelzl, E. (2010). Positive moral contamination and consumer behavior. European Conference on Positive Psychology 2010, Kopenhagen, Denmark, 23rd 26th June 2010. [Talk]
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Schriftliche Publikationen

Susewind, M. & Hoelzl, E. (under review at Personality and Social Psychological Bulletin). To be Moral is to be Seen Moral: Lack of Social Recognition Encourages Further Moral Striving.

Susewind, M. & Hoelzl, E. (revised at Applied Journal of Social Psychology). Why Past Moral Behavior can Discourage and Encourage Future Moral Behavior.

Susewind, M. & Hoelzl, E. (under review at Journal of Experimental Social Psychology). Feel the Moral Weight on Your Shoulders – How Material Objects are Experienced as Heavier or Lighter through Moral Meaning.

Mitgliedschaften

Seit Juli 2012 Gesellschaft für Wirtschafts- und Sozialpsychologische Forschung

Seit April 2012 Association for Psychological Science
Seit April 2012 Deutsche Gesellschaft für Psychologie e.V.

Sonstige Tätigkeiten

März 2001 - Dezember 2003 **Jugendfußballtrainer** , TUS Oeventrop, Oeventrop

 Betreuung von Jugendmannschaften im Alter von 9-11 bzw. 15-18 Jahren

Interessen

Fußball spielen, Radfahren und Radreisen, Wandern

Skills

- Fundierte methodische Kenntnisse von Diagnostik und Evaluationsverfahren
- fundierte methodische Kenntnisse in der Planung und Auswertung empirischer Studien
- Erfahrung im Verfassen von Publikationen in englischer und deutscher Sprache.
- Sehr gutes English in Wort und Schrift
- Gute Grundlagen in Italienisch in Wort und Schrift.
- Gute Kenntnisse in Word, Excel, Powerpoint, SPSS