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## Moral motivation within groups

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# Chapter 3

Threatened by the Immoral, Challenged by  
the Incompetent

*Psychophysiological Responses*

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This chapter is based on Van der Lee, R., Ellemers, N., & Scheepers, D. (2012b). Threatened by the immoral, challenged by the incompetent: Cardiovascular responses to intragroup morality vs. competence evaluations. *Manuscript under review.*



Morality judgments have important social implications: They not only provide social norms about what one should and should not do; they are also used to regulate the behavior of individuals in groups (De Waal, 1996; Ellemers & Van den Bos, 2012; Leach, Bilali, & Pagliaro, 2013). For example, moral guidelines indicating what is normative for the group impact upon behavioral choices of group members, and moral (more so than competence) evaluations determine group members' willingness to help a newcomer in the group (Ellemers, Pagliaro, Barreto, & Leach, 2008; Pagliaro, Brambilla, Sacchi, D'Angelo, & Ellemers, 2013). This suggests that moral disapproval of past behavior might be particularly useful as a way to regulate behavioral change. However, is this really the case? We propose that the opposite might actually be true and that moral disapproval can impede rather than foster behavioral change.

Why would moral disapproval provide an inefficient way to alter group members' behavior? We argue that the greater psychological impact of morality judgments may impede group members' perceived ability to *cope* with moral disapproval. This implies that the demands of coping with negative evaluations are increased when these pertain to morality (rather than competence) evaluations. As a result, we predict that negative morality evaluations are more threatening and may therefore be less efficient as a way to motivate group members to adapt their behavior.

The aim of the current research is to gain more insight in the motivational implications of negative morality vs. competence evaluations in group contexts. In two experiments we compare behavior indicative of morality to behavior indicative of competence, which are both key sources of esteem and success for groups and their members (e.g., Fiske, Cuddy, Glick, & Xu, 2002; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Leach, Ellemers, & Barreto, 2007). In addition, we investigate the social implications of morality evaluations by examining judgments of behavior of the *self* as a group member (Experiment 3.1) as well as judgments regarding the behavior of *another* ingroup member (Experiment 3.2). Given that the behavior of other ingroup members is self-relevant because this affects one's social identity, we expect similar effects of morality vs. competence evaluations on motivation, regardless of whether the judgment concerns one's own behavior or an ingroup member's behavior.

### **The motivational implications of morality and competence**

People desire having a moral identity (Monin & Jordan, 2009) and strive to be (perceived as) moral (Jordan, Mullen, & Murnighan, 2011). The motivation to be seen as moral directly affects displays of moral behavior. That is, individuals engage in compensatory behaviors when their moral identity has been called into question (Sachdeva, Iliev, & Medin, 2009). For example, individuals who are reminded of past immoral actions report more prosocial intentions such as donating to charity (Jordan et al., 2011). This demonstrates that individuals whose behavior is negatively evaluated in terms of morality (e.g., through reminders of past immoral acts) increase their striving to act morally. As a consequence, it could be argued that moral disapproval of past behavior constitutes an effective way to motivate group members to change their behavior. However, despite the motivational power of salient moral transgressions, individuals can also feel bad as a result of them. For example, when group members recall a negative evaluation of their behavior in terms of morality (vs. competence), they show more negative affective responses and a decrease in their perceived ability to cope with the situation (Van der Lee, Ellemers, & Scheepers, 2012a). Thus, reminders of immoral acts on the one hand increase the *desire* to act morally, but on the other hand decrease the (perceived) *ability* to do so.

### **Challenge and threat as motivational states**

The biopsychosocial model (BPSM; Blascovich & Mendes, 2000; Blascovich & Tomaka, 1996) describes motivational states during motivated performance situations (e.g., giving a speech, working on a group-decision task) along a bipolar continuum ranging from “challenge” to “threat”. According to the BPSM, appraisals of motivated performance situations in terms of their demands (e.g., uncertainty and required effort) and available resources to cope with these demands (e.g., knowledge and skills) result in a motivational state of challenge vs. threat. More specifically, when situational demands outweigh individual resources, a state of *threat* emerges. Conversely, when individual resources match or outweigh situational demands a state of *challenge* emerges.

Challenge and threat motivational states are marked by specific patterns of cardiovascular reactivity. First, task engagement and goal relevance (a fundamental characteristic of motivated performance) are indicated by an

increase in heart rate (HR) and a decrease in pre-ejection period (PEP; an index of left ventricular contractile force). Second, a combination of cardiac output (CO; the amount of blood in liters that is pumped through the heart per minute) and total peripheral resistance (TPR; the resistance—constriction vs. dilation—of blood flow through the arterial system) index challenge and threat: Challenge is marked by relatively high CO and low TPR, whereas threat is marked by relatively low CO and high TPR.

In the context of the BPSM, the motivational states of challenge and threat (and their cardiovascular correlates) have been related to specific cognitive and behavioral outcomes. For example, challenge has been shown to positively correlate with a range of cognitive and physical performance outcomes (Blascovich & Mendes, 2010; Blascovich, Seery, Mugridge, Norris, & Weisbuch, 2004; Seery, Weisbuch, Hetenyi, & Blascovich, 2010). Threat, by contrast, has been related to rigidity in conflict situations (De Wit, Scheepers, & Jehn, 2012) and may have negative health implications in the long run (Blascovich, 2008a).

We propose that differentiating between motivational states of challenge and threat provides a powerful tool to understand how group members deal with negative morality vs. competence evaluations. We argue that morality evaluations generally are more demanding than competence evaluations. First, morality evaluations are more important than competence evaluations for a positive evaluation of the self (Aquino & Reed, 2002) and the group (Leach et al., 2007). Second, negative comments about one's morality are perceived to be more diagnostic of the self (being seen as having more predictive value for future behavior) than negative comments about one's competence (Skowronski & Carlston, 1987). Finally, prior research has demonstrated that critical evaluations regarding morality result in more negative affect (Van der Lee et al., 2012a) and identity threat (Kouzakova, Ellemers, Harinck, & Scheepers, 2012) as compared to critical evaluations regarding competence. These are all factors that potentially increase perceptions of (required) effort, thereby enhancing the situational demand-appraisals (e.g., Blascovich, 2008b). As a consequence, we predict that negative morality rather than competence evaluations are more likely to induce a motivational state of threat instead of challenge. Considering the negative implications of threat in terms of cognitive and behavioral performance (e.g., Blascovich & Mendes, 2010; Blascovich et

al., 2004; Seery et al., 2010), morality evaluations might therefore not provide the most efficient route to establish behavioral change in group members.

### **The current research**

In two studies, we expose group members to negative evaluations of moral vs. competent behavior by asking them to recall instances of such evaluations of their own prior behavior (Experiment 3.1) or by confronting them with such evaluations of an ingroup member's prior behavior (Experiment 3.2). In both studies, the evaluations were made in a salient group context. Across studies we measured group members' motivational states through cardiovascular markers of challenge and threat. By applying the BPSM of challenge and threat we provide novel insight in the motivational states of group members when coping with negative intragroup evaluations. We hypothesize that a negative evaluation of morality (vs. competence) induces a state of threat rather than challenge. We expect this pattern to occur regardless of whether the judgment targets own behavior or an ingroup member's behavior.

### **Experiment 3.1**

In the first experiment, participants recalled a situation in which their behavior was evaluated as either immoral or incompetent by others in a group context. Then, in a novel group context created in the lab, a group task was introduced for which either morality or competence (depending on condition) was said to be the primary performance dimension. In anticipation of the task, participants ostensibly had a within-group communication opportunity (by means of a video circuit), where they presented their views on how to perform on the task. This was the motivated performance situation we focused on to assess cardiovascular indices of challenge and threat. We predicted that being reminded of own prior behavior evaluated by others in a group context as immoral (vs. incompetent) would induce a relative state of threat rather than challenge. We also examined whether recalling negative morality vs. competence evaluations would lead to differences in collective self-esteem. In addition, we measured the perceived stability of behavior displayed during the group task as an indicator of situational demand-appraisals. As outlined above, one of the reasons why (im)morality judgments might be rather threatening is



that they may be seen as more diagnostic of the self—and thus perceived to be more stable over time—than incompetence judgments (Skowronski & Carlston, 1987).

## Method

*Participants & design.* Seventy-three undergraduate students (50 women,  $M_{\text{age}} = 21.41$  years,  $SD = 3.19$ ) participated in this experiment. They received 6 Euros or course credits for participation. Using a 1-factor (Dimension: Morality vs. Competence) between-subjects design, participants were randomly assigned to one of the two experimental conditions. Participation took about 45 minutes.

*Procedure.* Participants arrived in the laboratory, were seated in front of a computer equipped with a webcam, and attached to the apparatus for measuring cardiovascular responses (see below). To measure electrocardiographic (EKG) and impedance cardiographic (ICG) signals, four spot electrodes were placed on participants' upper and lower back and two on their chest. In addition, a blood pressure sensor was attached to the index finger of their non-dominant hand. We then took a 5-minute baseline measure of their cardiovascular responses.

Participants were told that the study was concerned with how people solve management dilemmas in groups. Participants (who were all referred to as “participant 2”) would be collaborating in a group with three other (fictitious) participants (indicated as participants “1”, “3”, and “4”) to discuss the role of *morality* [*competence*] in solving such dilemmas. Ostensibly in order to enhance the collaboration and performance on the task, participants were first asked to recall a prior situation in which they had behaved in a way that was evaluated as either *immoral* or *incompetent* (depending on condition) by others in a group context. The others in the group were allegedly asked to do the same. This served as our manipulation of evaluative dimension.

Participants then completed a short questionnaire (see below) and were presented with several example dilemmas, after which they delivered a speech in front of a webcam. During this speech task, participants presented their ideas about the role of *morality* [*competence*] in solving management dilemmas. The speeches recorded by each group member would allegedly be shown to the others in the group, with the purpose of forming an impression of each

other and facilitating collaboration during the group task. Participants were (ostensibly randomly) chosen to record their speech first. They could take up to three minutes for their speech. When participants finished their speech, which was the motivated performance situation we focused on regarding the cardiovascular indices of challenge and threat (e.g., Blascovich et al., 2004; Mendes, Blascovich, Hunter, Lickel, & Jost, 2007; Scheepers, De Wit, Ellemers, & Sassenberg, 2012), they reached the end of the study and were debriefed, paid, and thanked for their participation.

*Self-report measures.* All questions were answered on 7-point scales (1 = *completely disagree* to 7 = *completely agree*). To check the effectiveness of the manipulation, participants reported the extent to which the purpose of the group task was to behave morally or competently (“I am going to show my group members how moral I am” and “I am going to show my group members how competent I am”). We measured private collective self-esteem with four items (Luhtanen & Crocker, 1992; e.g., “I am glad to be a member of this group”;  $\alpha = .67$ ). To assess demand-appraisals, we measured perceived *stability* of behavioral evaluations during the group task with two items (“I think my group members perceive my behavior as stable” and “I think my group members will not change their opinion about me, even if I would behave differently”,  $r = .42$ ,  $p < .001$ ).

*Cardiovascular measures.* Electrocardiographic signals (EKG), impedance-cardiographic signals (ICG), and blood pressure were continuously measured during the experiment using a Biopac MP150 system (Biopac Systems Inc., Goleta, CA). Electrocardiography was measured using an ECG100 module and a Lead I electrode configuration, from which heart rate (HR) is derived. For measuring ICG, the NICO100c module was used. It provides measures of baseline impedance ( $Z_0$ ) and the rate of change in impedance ( $dZ/dt$ ), which yields indices of cardiac performance (e.g., PEP and CO; see Sherwood et al., 1990).

The blood pressure monitor provided a measure of mean arterial pressure (MAP) which, in combination with CO, can be used to calculate TPR. Cardiovascular data was stored using *Acqknowledge* software (Biopac Systems, Goleta, CA) and manually scored using MATLAB software (The MathWorks,

Inc., Natick, MA) following standard guidelines (Sherwood et al, 1990; see also De Wit et al., 2012).

## Results and Discussion

The data of five participants were removed from all analyses due to expressed suspicion about the cover story, resulting in 68 participants with usable self-reported data. Due to signal loss,<sup>8</sup> we were left with usable cardiovascular data of 41 participants.

*Checks.* The manipulation of dimension was successful. A repeated-measures ANOVA yielded a significant interaction between dimension and the manipulation check items,  $F(1, 66) = 7.43, p = .008, \eta_p^2 = .10$ . Simple main effect analysis showed that participants in the morality condition indicated to a greater extent that their goal was to behave morally ( $M = 5.26, SD = 1.12$ ) than competently ( $M = 4.66, SD = 1.30$ ) during the group decision-making task,  $F(1, 66) = 7.23, p = .009, \eta_p^2 = .10$ . Although participants in the competence condition did not distinguish between the extent to which it was their goal to behave morally ( $M = 4.97, SD = 1.33$ ) and competently ( $M = 5.24, SD = 1.06$ ),  $F(1, 66) = 1.41, p = .24, \eta_p^2 = .02$ , they did indicate to a greater extent that their goal was to behave competently ( $M = 5.24, SD = 1.06$ ) than did participants in the morality condition ( $M = 4.66, SD = 1.30$ ),  $F(1, 66) = 4.09, p = .047, \eta_p^2 = .06$ . Thus, in the morality condition, morality was indeed perceived to be more important than competence. Although in the competence condition competence goals were not seen as significantly more important than morality goals (which supports the notion that morality is overall of great importance to individuals; e.g., Aquino & Reed, 2002), as intended—they were seen as more important than the competence goals in

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<sup>8</sup> Data collection took place in two separate waves. Due to blood pressure equipment failure during the first phase, a different blood pressure monitor was installed in our cardiovascular laboratory. For the first wave of participants, blood pressure was measured using a NIBP100a module (Biopac Systems Inc., Goleta, CA). For the second wave of participants, blood pressure was measured using a Nexfin monitor (BMEYE, Amsterdam, The Netherlands). To ensure the type of equipment did not affect our measures, we added this as a Factor in our design. Type of blood pressure equipment did not moderate the effect of Dimension on CV-responses (all  $F$ s < 1.01,  $p$ s > .3).

the morality condition. There were no differences between conditions in private collective self-esteem,  $F(1, 66) = 1.32, p = .25$ .

As anticipated, participants in the morality condition were more inclined to think that their behavior would be perceived as stable by their fellow ingroup members ( $M = 4.68, SD = 1.09$ ) than participants in the competence condition ( $M = 3.97, SD = 1.04$ ),  $F(1, 66) = 7.66, p = .007, \eta_p^2 = .10$ . Perceptions of pervasiveness arguably undermine the perceived feasibility of changing the group's impression of one's behavior, thereby increasing the perceived (required) effort resulting in higher demand-appraisals after a negative morality evaluation compared to a negative competence evaluation.

### ***Cardiovascular reactivity***

We computed mean scores for HR, PEP, CO and TPR for the last minute of the baseline and the first minute of the speech task. We then computed reactivity scores (Kamarck et al., 1992) by subtracting the baseline scores from the speech task scores (see Table 3.1). For each reactivity score, we transformed outliers (i.e., raw scores more than 3 *SDs* from the mean) to the most extreme score within 3 *SDs* above or below the mean.

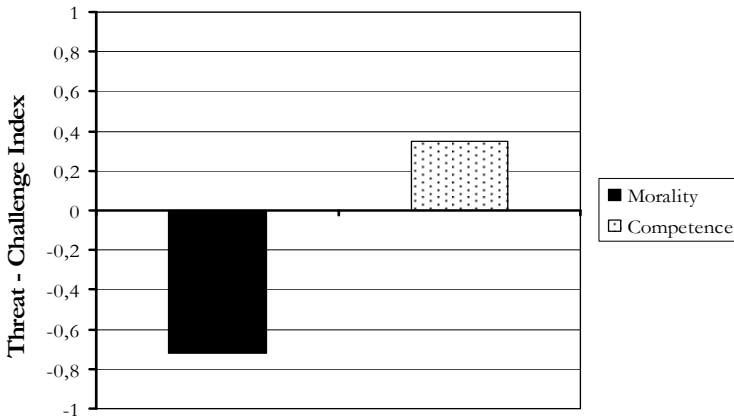
**Table 3.1**

*Means and Standard Errors of Cardiovascular Reactivity as a function of Evaluative Dimension in Experiment 3.1*

	Morality	Competence
	<i>M (SEM)</i>	<i>M (SEM)</i>
Heart Rate	7.72 (1.69)	9.64 (1.72)
Pre-Ejection Period	-6.03 (3.62)	-9.36 (2.92)
Cardiac Output	0.07 (0.09)	0.33 (0.08)
Total Peripheral Resistance	282.68 (202.17)	-95.56 (178.62)

*Task engagement.* Overall, HR increased and PEP decreased significantly from zero, in both conditions, during the speech task,  $t_s > 3.48$ ,  $p_s < .001$ , confirming sufficient overall task engagement and goal relevance. There were no differences between conditions in both HR and PEP ( $F_s < 1$ ,  $p_s > .44$ ).

*Challenge and Threat.* We calculated a single Threat – Challenge Index (i.e., TCI) using standardized z-scores of CO and TPR in the following formula:  $ZTPR * -1 + ZCO * 1$  (e.g., Blascovich et al., 2004; Scheepers et al., 2012; Seery et al., 2010). Greater values indicate a relative tendency towards challenge, whereas lower values are indicative of a relative tendency towards threat. We analyzed TCI by means of an ANOVA with dimension as independent variable and included the baseline TCI values and PEP reactivity scores as covariates to control for differences in initial challenge and threat responses and engagement (e.g., Seery, Blascovich, Weisbuch, & Vick, 2004; Weisbuch-Remington, Mendes, Seery, Blascovich, 2005). As predicted, participants in the morality condition were relatively more threatened ( $M = -0.72$ ,  $SEM = 0.42$ ) than participants in the competence condition, who were relatively more challenged ( $M = 0.35$ ,  $SEM = 0.37$ ),  $F(1, 37) = 4.17$ ,  $p = 0.048$ ,  $\eta_p^2 = .10$  (see Figure 3.1). Thus, being reminded of one's own behavior being evaluated as immoral by others in a group is relatively more threatening than one's own behavior being evaluated as incompetent.



**Figure 3.1**

*Threat – Challenge Index as a function of evaluative dimension of own prior behavior in a group context, Experiment 3.1. Higher scores indicate a relative tendency towards challenge; lower scores indicate a relative tendency towards threat.*

### Experiment 3.2

Whereas in Experiment 3.1 participants were exposed to negative evaluations of own prior behavior in a group context, in Experiment 3.2 participants were exposed to evaluations of prior immoral or incompetent behavior of another ingroup member. In order to increase the salience of the lack of morality or competence displayed by another ingroup member, we enhanced the contrast between group members' own behavior and the behavior of another group member. We did so by instructing group members to first recall a situation in which their own behavior was *positively* evaluated as moral or competent by others in a group context. Participants sent their behavioral description to others in the group via a chat circuit, and in turn received preprogrammed information allegedly indicating the behavioral descriptions provided by other group members. We varied the behavioral description of one of the ingroup members to convey that this group member had behaved in a way that was *negatively* evaluated as *immoral* or *incompetent*.

We assessed cardiovascular reactivity during the subsequent group task, and predicted that an ingroup member's behavior indicating immorality would induce more threat than an ingroup member's behavior indicating incompetence. In addition to measures of demand-appraisals (i.e., perceived stability of behavior) and collective self-esteem, in the second experiment we also assessed identification with the group to rule out the possibility that a negative (morality) evaluation of an ingroup member would lead participants to disengage from the group and the joint task.

## Method

*Participants and Design.* Forty-nine undergraduate students (33 women,  $M_{\text{age}} = 21.73$  years,  $SD = 3.22$ ) participated in this experiment. They received 6 Euros or course credits for participation. Using a 1-factor (Dimension: Morality vs. Competence) between-subjects design, participants were randomly assigned to one of the two experimental conditions. Participation took about 45 minutes.

*Procedure.* The general procedure of the second experiment was similar to that of the first. Following the cover story of Experiment 3.1, we introduced the group task and assessed collective self-esteem and a pre-measure of group identification, as well as a baseline measure of cardiovascular responses. After participants (again referred to as “participant 2”) had provided descriptions of their own behavior that was positively evaluated as *moral* [*competent*] by others in a group context, they received preprogrammed behavioral descriptions of the others in their group. One of the group members (i.e., “participant 4”) allegedly had described *immoral* [*incompetent*] behavior, indicating being unable to recall an instance in which the group positively evaluated his/her moral or competent behavior and thus describing an instance in which s/he was confronted by others in the group with his/her *immoral* [*incompetent*] behavior.<sup>9</sup> This served as our manipulation of the negative evaluation of an

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<sup>9</sup> The behavior was kept constant across conditions, but with different implications for the morality or competence of this ingroup member. The exact wording of the manipulation was as follows: “At my job as a member of a committee that organizes workshops, we also have to design flyers to promote the workshops. Designing the flyers always takes forever. One time I just went ahead and sent the flyer to the printer myself ...” In the morality condition the manipulation continued with “... without consulting the other committee members. I now have 400 flyers, but I

ingroup member's behavior in terms of morality or competence. Participants then completed a questionnaire measuring their identification with the group and the perceived stability of the behavior of participant 4. Next, they engaged in a speech task in which they presented their ideas about the role of *morality* [*competence*] in the upcoming group task, with the purpose of forming an impression of the others in the group and facilitating collaboration during the group task. This was the motivated performance situation that allowed us to assess cardiovascular indices of challenge and threat.

*Measures.* As a check of the effectiveness of the dimension manipulation, participants indicated whether the focus of the group task was: A. *moral* or B. *competent* behavior. We measured private collective self-esteem ( $\alpha = .88$ ), group identification (Ellemers, Spears, & Doosje, 1999; four items; e.g., "I feel connected to the others in this group";  $\alpha = .92$ ), and demand-appraisals in terms of stability of behavior ("I think participant 4 will display similar behavior in the future"). Similar to the procedure described in Experiment 3.1, we took continuous cardiovascular measures of HR, PEP, CO, and TPR throughout the experiment.

## Results and Discussion

Four participants reported suspicion about the cover story and their data were therefore excluded from analyses. This resulted in a sample of 45 participants. Due to technical errors we lost physiological data of an additional two participants, leaving 43 participants with usable cardiovascular data.

*Checks.* The manipulation of dimension was successful: In both conditions, 100% of participants indicated the correct dimension as the focus of the group task,  $\chi^2(1, N = 43) = 43.00, p < .001$ . As anticipated, participants in the morality condition indicated that they perceived the behavior of participant 4 to be somewhat more stable ( $M = 5.09, SD = 1.34$ ) than participants in the competence condition ( $M = 4.45, SD = 1.18$ ),  $F(1, 41) = 3.07, p = .09, \eta_p^2 = .07$ .

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have lost there trust." In the competence condition the manipulation continued with "... without changing the date of the workshop. I now have 400 flyers, with the wrong date on it."



A marginally significant effect of dimension emerged on collective self-esteem,  $F(1, 41) = 3.59$ ,  $p = .065$ ,  $\eta_p^2 = .08$ ; participants in the morality condition reported slightly higher private collective self-esteem ( $M = 5.71$ ,  $SD = 1.11$ ) than participants in the competence condition ( $M = 5.04$ ,  $SD = 1.20$ ). Including collective self-esteem as a covariate in the subsequent analyses did not alter the effect of dimension on our dependent measures, nor did it predict the dependent measures.

A repeated measures ANOVA with time of measurement (Time 1 and Time 2) as within-subject variable and dimension as between-subject variable on identification revealed a main effect of time of measurement: Group identification increased after the alleged group interaction (Time 1:  $M = 3.31$ ,  $SD = 1.46$ ; Time 2:  $M = 4.48$ ,  $SD = 1.34$ ),  $F(1, 41) = 22.03$ ,  $p < .001$ ,  $\eta_p^2 = .35$ . The interaction between time of measurement and dimension was not significant,  $F(1, 41) = 1.60$ ,  $p = .21$ ,  $\eta_p^2 = .04$ .

### ***Cardiovascular reactivity.***

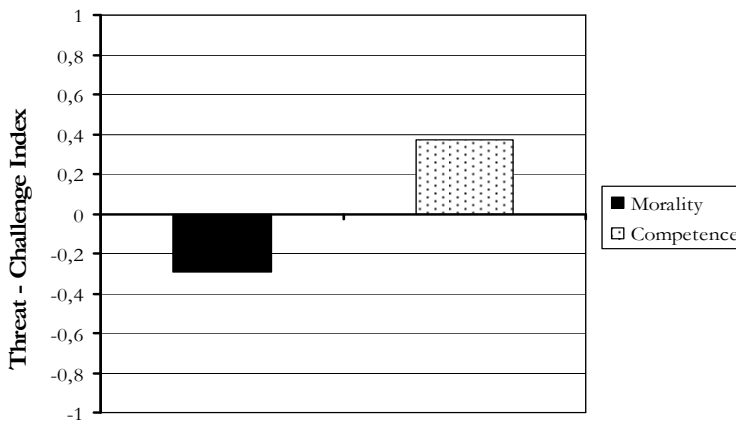
*Task engagement.* In both conditions, HR increased and PEP decreased significantly from zero during the speech task,  $t_s > 2.78$ ,  $p_s < .01$ , confirming task engagement and goal relevance (see Table 3.2). There were no differences between conditions in both HR and PEP ( $F_s < 1$ ,  $p_s > .48$ ).

**Table 3.2**

*Means and Standard Errors of Cardiovascular Reactivity as a function of Evaluative Dimension in Experiment 3.2*

	Morality	Competence
	<i>M (SEM)</i>	<i>M (SEM)</i>
Heart Rate	7.54 (1.50)	5.84 (1.84)
Pre-Ejection Period	-6.96 (1.99)	-5.53 (1.99)
Cardiac Output	0.15 (0.05)	0.19 (0.05)
Total Peripheral Resistance	403.50 (255.74)	-318.72 (249.82)

*Challenge and threat.* An ANOVA on the Threat – Challenge Index, again with dimension as independent variable and baseline TCI values and PEP reactivity scores as covariates, revealed, as predicted, that participants in the morality condition showed a relative tendency towards threat ( $M = -0.29$ ,  $SEM = 0.29$ ), whereas participants in the competence condition showed a relative tendency towards challenge ( $M = 0.37$ ,  $SEM = 0.29$ ),  $F(1, 39) = 4.94$ ,  $p = 0.03$ ,  $\eta_p^2 = .11$  (see Figure 3.2).



**Figure 3.2**

*Threat – Challenge Index as a function of evaluative dimension of an ingroup member’s prior behavior, Experiment 3.2. Higher scores indicate a relative tendency towards challenge; lower scores indicate a relative tendency towards threat.*

Thus, the evaluation of an ingroup member’s behavior as immoral (vs. incompetent) induces a motivational state of threat rather than challenge in other group members. Considering the impact of morality on individuals’ self-image and motivation (e.g., Aquino & Reed, 2002; Ellemers et al., 2008), a plausible response to the immorality of an ingroup member would be to disengage from the group task and disidentify with the group, especially when

group membership is relatively unimportant which can be the case with experimental groups like those created in the current study. Our data rule out this alternative explanation, as identification even increased during the course of the experiment (see also Doosje, Ellemers, & Spears, 1995), and private collective self-esteem was slightly raised in the morality condition. In addition, there were no differences between conditions in cardiovascular reactivity indicative of task engagement (increased HR, decreased PEP). Thus, participants remained attached to the group and engaged in the task when morality was made salient, even though collaborating with an ingroup member who previously displayed immoral behavior was motivationally threatening rather than challenging for them.

### **General Discussion**

In two experiments we investigated how negative intragroup morality vs. competence evaluations affect the motivational states of individual group members. In Experiment 3.1, we demonstrated that own prior behavior evaluated as immoral (as compared to incompetent) by others in a group context is perceived as more pervasive (i.e., stable) and induces a relative state of threat rather than challenge. We found similar effects for negative evaluations of another ingroup member's behavior. In Experiment 3.2, another ingroup member's behavior evaluated as immoral (vs. incompetent) elicited a relative threat rather than challenge response in group members.

These results extend prior work and are in line with a social identity perspective on morality that argues for a group-based analysis of how morality regulates social behavior (Ellemers & Van den Bos, 2012). The current data support the notion that the relevance of morality judgments stems from their implications for group inclusion and acceptance (Leach et al., 2013). Extending previous research that revealed the impact of morality vs. competence ingroup norms on behavioral choices (e.g., Ellemers et al., 2008), we assessed how morality judgments of individual behavior in an intragroup setting induce specific motivational states. The present results support the notion that morality is of particular importance to group members. That is, in Experiment 3.2 we demonstrated how the behavior of someone important for one's identity (i.e., an ingroup member) affects the motivational state of the self as a group member. If the threat elicited by the mere presence of immoral ingroup

members would impact on personal identity concerns, this should have decreased the willingness to identify with the group, as a way to dissociate the self from the immoral individual. However, group identification was retained and improved, even when the presence of an immoral ingroup member constituted a source of threat. Future research might further distinguish between the different sources of identity threat, by comparing responses to the behavior of ingroup members to responses to the behavior of other individuals in an interpersonal context, or to responses to the behavior of outgroup members in an intergroup context.

By examining the cardiovascular indices of motivational states, the current research also provides further insight in the psychophysiological processes elicited by morality judgments. Both studies showed that reminders of immorality (vs. incompetence) in a group context are threatening rather than challenging, indicating that morality increases the salience of situational demands to the extent that they outweigh available resources. This notion is further supported by our observation that group members perceive immoral behavior to be more pervasive than incompetent behavior. The more pervasive the focal behavior is perceived to be, the more effort is needed to change other people's judgments, thereby increasing the situational demands. This has implications for the behavioral choices of group members and outcomes for the group. When group members experience threat rather than challenge, they become more rigid in their joint decision making (De Wit et al., 2012), implying that they tend to hold on to their initial viewpoints. Evaluations of immoral (vs. incompetent) behavior, which induce a state of threat rather than challenge, may consequently be less efficient in eliciting behavioral change, because threat tends to impede rather than foster attitudinal or behavioral adjustments.

Group members critically evaluate the behavior of their fellow ingroup members in an attempt to elicit desirable behaviors that reaffirm the positive social identity (e.g., Levine & Moreland, 1994). From the perspective of the group it might intuitively seem most effective to negatively evaluate their group members' behavior in terms of morality rather than competence in order to foster behavioral change. Considering the importance of morality for the individual (e.g., Aquino & Reed, 2002) and group members' motivation to adhere to moral (vs. competence) norms (Ellemers et al., 2008), this seems

highly plausible. Yet, as we have argued and shown in the current research, communicating moral disapproval of the behavior of individual group members might actually be a counter-efficient strategy to achieve behavioral change. Indeed, negative evaluations of group members' behavior in terms of morality (vs. competence) elicit a motivational state of threat rather than challenge. Moral disapproval thus does not provide an easy tool for a group to shape the behavior of its members. When the aim is to motivate group members towards behavioral change, using moral disapproval might backfire and actually be counterproductive.

