



## Article

# How Power Affects Moral Judgments: The Presence of Harm to Life Modifies the Association between Power and Moral Choices

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**Abstract:** Lammers and Stapel reported that high power increases deontological (rule-based) moral thinking, and low power increases utilitarian (outcome-based) moral thinking. However, the dilemmas were mild and did not involve harm to life. Here, we examined whether the presence or absence of harm to life affects the moral decisions of powerholders. To help establish the replicability and validity of the effects of power on moral judgments in the absence of harm to life, we first performed an exact replication of a study conducted by Lammers and Stapel, and this experiment was followed up by a similar study in an organizational context in China (Studies 1 and 2). Studies 3 and 4 investigated whether power and the presence/absence of harm to life interacted with preferences for deontological versus utilitarian moral judgments. Power consistently triggered deontological thinking. However, power differences in moral reasoning only emerged when there was no harm to life. Harm prompted deontological responses among control and powerless individuals, which nullified differences across the power conditions. The findings demarcate the generalizability of the association between power and a moral thinking style.

**Keywords:** power; moral judgment; deontology; utilitarianism; harm



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## 1. Introduction

People in authority positions often make decisions that have moral implications. For example, in the context of the COVID-19 pandemic, governments worldwide were confronted with the challenge of allocating scarce medical resources, and they needed to choose whether to uphold the principle of fairness, based on a first-come, first-served basis, ensuring equal treatment for all individuals, even if some may have faced death despite the utilization of medical resources. Alternatively, should limited medical resources be allocated to individuals who have a higher likelihood of survival? This decision-making process involves carefully navigating the ethical principles of fairness, human rights, and the maximization of lives saved. This entails a consideration of both deontological and utilitarian moral principles. A deontological decision involves taking care of life without considering other consequences. The utilitarian alternative overrides these considerations if they do not provide the maximum benefits for the greatest number (Bentham [1789] 1948; Darwall 2003a, 2003b; Kant 1785).

Evidence has shown that moral reasoning is affected by contextual factors (Haidt 2001; Valdesolo and DeSteno 2006; Wheatley and Haidt 2005). Studies suggest that power, a ubiquitous factor linked to control and influence (Keltner et al. 2003), affects moral reasoning. The possession of power increases a preference for deontological principles, whereas a lack of power instills concerns about the practical consequences of moral decisions in line with utilitarian considerations (Lammers and Stapel 2009). Fleischmann et al. (2019) employed the process dissociation technique to examine the mediating role of power in the relationship between deontological and utilitarian thinking styles. Their findings indicate that power enhances deliberation, integration, and rule orientation, and these thinking

styles serve as mediators between power and moral thinking orientation, specifically deontological and utilitarian perspectives. [Gawronski and Brannon \(2020\)](#) used the CNI model to explore how power affects moral judgments and found that power influences sensitivity to norms differently in different induction conditions.

Comparing this research, there are still some unclear issues. Nearly all moral dilemmas used in [Fleischmann et al. \(2019\)](#) and [Gawronski and Brannon's \(2020\)](#) study were classical sacrificial moral dilemmas, such as the trolley dilemma, and their focus was on how power affects the processes of moral reasoning and the parameter of deontological and utilitarian thinking, or the parameter of sensitivity to norms, but not final moral choices. Nevertheless, [Lammers and Stapel \(2009\)](#) adopted moral dilemmas that were not involved in harm and about the conflicts of rule and outcomes and showed that power can influence the final choices in moral dilemmas. We can see a difference here: power has different influences on moral judgments in different types of moral contexts. Then, we think that it is necessary to compare moral choices in a moral context involving harm or not and to discuss how the presence of harm influences the effect of power on moral judgments.

## 2. Power

Power is usually constructed as control ([Fiske 1993](#); [Galinsky et al. 2003](#)). [Keltner et al. \(2003\)](#) defined it as the capacity to modify others' states by providing or withholding resources or administering punishments ([Keltner et al. 2003](#)). Some researchers posit that power is social, as it emerges in relationships ([Emerson 2019](#)). However, [Anderson et al. \(2012\)](#) argue that power should not be solely understood as control over resources or determined solely by one's social position. They propose that power is also a psychological state, specifically, an individual's perception of their own ability to influence others, and consequently, individuals' beliefs regarding their power can significantly impact their actual influence over others, surpassing the effects of their sociostructural position.

Extant research has demonstrated that the experience of power carries over across contexts with stability. For instance, people who occupy high-power occupational roles tend to experience higher levels of power compared with those who occupy low levels of power ([Smith and Hofmann 2016](#)). Meanwhile, possession and sense of power change people's mental activities, with few exceptions ([Fiske 1993](#); [Guinote 2017](#); [Keltner et al. 2003](#)).

Power is a label referring to a range of intrapsychic and interpersonal phenomena, and the focal phenomenon in different studies or definitions differs from one another. Sociology, philosophy, and politics mainly regard power as a sociostructural variable (e.g., [Ng 1980](#)) and discuss the sources of social power considering human nature, the social dynamics of power relationships, and how power influences social development ([Mann and Kawakami 2012](#)). Social power was treated as a personal characteristic and was defined as the ability to obtain what one wants or desires ([Russell 1938](#)).

In the last decades, researchers started to study social power as one kind of psychological state (e.g., [Galinsky et al. 2003](#)). People can form internal representations about power relative to others in specific contexts or relationships ([Anderson and Galinsky 2006](#)). This sense of power can be activated whenever cues related to the possession of power occur in the context or when past experiences about power are asked to be recalled ([Chen et al. 2001](#); [Galinsky et al. 2003](#)). Everyone can experience power at some point in their life if they control resources to influence others. Furthermore, researchers also proposed that feelings of power can be induced by experimental manipulation (e.g., [Bargh et al. 1995](#); see also [Anderson and Galinsky 2006](#)).

The earliest clear psychological definition of social power is from [Fiske \(1993\)](#). She defined power as asymmetrical control over another person's outcomes. In many later theories, power is defined from the perspective of controlling resources. For example, [Keltner et al. \(2003\)](#) also defined power as the capacity to modify others' states by providing or withholding resources or administering punishments. Power holders can control the thoughts, feelings, and behaviors of their subordinates. [Galinsky et al. \(2003\)](#) defined power as the ability to control resources, own and others', without social interference. They

mentioned that power depends less on the resources of others, and they are easily to satisfy their own needs and desires.

These definitions require that those in power must possess resources and have the ability and behavior to change the status of those with less power. However, subsequent research has shown that power is not only regarded as actual control but also as a psychological state. When individuals are not actively exercising their power but simply experiencing a sense of power, this feeling can still influence their subsequent cognition and behavior. For example, [Anderson et al. \(2012\)](#) developed a scale to assess the sense of power. They considered the sense of power as a psychological state that is subject to perceptions of one's ability to influence others ([Bugental et al. 1989](#); [Galinsky et al. 2003](#)). They argue that individuals who control resources may not necessarily have power. For example, parents generally wield greater authority over their young children. They possess the ability to regulate essential resources like sustenance, security, comfort, and emotional support, and they are primarily responsible for making decisions on behalf of their children. However, many parents perceive themselves as lacking control over their young children. ([Bugental et al. 1989](#); [Bugental and Lewis 1999](#)).

Therefore, the personal perception of power held by individuals is distinct from the societal and structural indicators of power. An individual's personal sense of power could align with their control over resources, their position of authority, or their perceived status among others. However, there are also other examples where these factors do not coincide ([Anderson et al. 2006](#); [Fast and Chen 2009](#)). Furthermore, an individual's beliefs about their power can significantly impact their actual influence over others, independent of their sociostructural position. Those who perceive themselves as powerful tend to exhibit more effective behaviors that enhance their actual power ([Bandura 1999](#); [Bugental and Lewis 1999](#)).

Many researchers have also developed different ways to manipulate the sense of power. Some approaches focus on allowing participants to truly experience control over others and the ability to change their states through actions, such as assigning individuals to positions that provide control over resources and influence over others (e.g., [Anderson and Berdahl 2002](#); [Kipnis 1972](#)). Other approaches focus on manipulating participants' experience of power by recalling past experiences of having or lacking power ([Galinsky et al. 2003](#)). Although they do not actually experience controlling resources and changing others' states in the experiment, such recollection can still make participants feel a sense of power and powerlessness.

### 3. Importance of the Link between Power and Moral Judgments

Understanding the link between power and moral judgments in various scopes is important at least for two reasons. First, power holders have control over resources and have the right to make decisions ([Emerson 2019](#); [Fiske 1993](#); [Galinsky et al. 2003](#); [Kipnis 1972](#)). In fact, decisions with moral implications are usually made by people with power, such as teachers, managers, and government officers. If powerful and powerless individuals manifest different moral thinking styles, this conflict of perspectives can hinder social harmony. Society and policymakers may need to consider these epistemological issues and intervene. It is necessary to understand this difference further.

Second, understanding how power affects moral reasoning informs theory about how power affects the mind. It identifies preferences for automatic, intuitive reasoning (vs. systematic reasoning). Deontology and utilitarianism are related to intuitive and systematic cognition, respectively ([Greene et al. 2001, 2004, 2008](#)). Although a great deal of research has investigated how power holders think about others, in particular whether they rely on stereotypes (e.g., [Fiske 1993](#); [Guinote and Phillips 2010](#); [Overbeck and Park 2001, 2006](#); [Schmid Mast et al. 2009](#)), much less is known about how power affects moral thinking style and moral judgments. Exploring the effect of the presence of harm would inform the debate between theories linking power to generalized fast and frugal decision making (e.g., [Keltner et al. 2003](#)), as well as motivational theories that have restricted fast and frugal

reasoning to the domain of impression formation and stereotyping (e.g., Fiske 1993; Fiske and Dépret 1996).

#### 4. Presence of Harm in Dilemmas

The presence of bodily harm is another important influencing factor in moral judgments (Bartels 2008; Tetlock et al. 2000). For instance, in the classical footbridge dilemma, people are less likely to, or have more difficulty making, utilitarian judgments when they engage in the dilemma with serious physical harm to specific person(s)/group(s) in order to achieve more benefits (Cushman and Greene 2012; Greene et al. 2001, 2004, 2009; Greene and Haidt 2002; Heekeren et al. 2005; Moore et al. 2008), as people avoid endorsing harming others (Greene and Haidt 2002; Thomson 1986).

The presence of serious physical harm to life decreases the likelihood of making utilitarian judgments, as it triggers intuitive aversion, and then people tend to make unconscious, quick disapproval choices (Bartels 2008; Graham et al. 2009; Haidt 2001, 2003; Tetlock et al. 2000; Wheatley and Haidt 2005). For example, people were driven by moral intuition to make disapproval judgments in ethical judgments in the presence of harm, but they could not give a justification for their decisions (Haidt 2001, 2003; Wheatley and Haidt 2005).

Dilemmas in which the solutions cause serious bodily harm or death to achieve greater good elicit strong aversive moral intuition and prompt deontological judgments (Greene et al. 2004; Koenigs et al. 2007; Moore et al. 2008). Oppositely, dilemmas without harm such as those used by Lammers and Stapel (2009) tend to evoke the decision maker's deliberation with an analysis of costs and benefits to oneself versus others (Petrinovich et al. 1993; see Moore et al. 2008). Neural image studies also found that emotion-related brain areas showed greater activity when responding to sacrificial dilemmas with physical harm than other dilemmas (Greene and Haidt 2002; Greene et al. 2001, 2004).

#### 5. How the Presence of Harm Modifies the Relationship between Power and Moral Thinking

As previously mentioned, two studies conducted by Lammers' laboratory (Fleischmann et al. 2019; Lammers and Stapel 2009) and one study by Gawronski and Brannon (2020) demonstrated that power has varying impacts on moral judgments across different types of moral dilemmas. Building upon these findings, our study aims to investigate the influence of power on moral judgments within distinct moral contexts, specifically focusing on how the presence or absence of harm affects the ultimate moral choices made by individuals in positions of power.

Lammers and Stapel's (2009) studies were based on relatively innocuous everyday life situations (Moore et al. 2008; Petrinovich et al. 1993). For instance, in one scenario (Study 2), a teacher had to decide whether to punish/reward a child in class. In another scenario (Study 3), a doctor had to decide whether or not to give a patient some bad news immediately. The daily life dilemmas in Lammers and Stapel's (2009) study discussed situations violating rules and regulations set by an organization/person. Meanwhile, all of these dilemmas do not discuss the role of physical harm.

Conversely, in Fleischmann et al.'s (2019) research and Gawronski and Brannon's (2020) study, the majority of moral dilemmas utilized were classical sacrificial dilemmas where the solutions cause serious bodily harm or death (Kahane 2015). The footbridge dilemma is a classic example. In this dilemma, the observer is given an opportunity to intervene in a scenario where a trolley will kill five people working on a train line unless the observer pushes a fat man in front of the train to stop it (Thomson 1976). Researchers posit that sacrificial dilemmas capture one point of conflict between utilitarianism and deontology, but they differ from everyday life moral contexts (Kahane 2015; Kahane et al. 2018). Dilemmas such as these draw on views about the value of life: they are present when ethical issues about abortion, euthanasia, and the distribution of scarce medical resources are considered, amongst others. A specific example is, "how a death comes about, whether

from natural causes, or at the hands of another.” (Thomson 1976). Sacrificial dilemmas are therefore a gateway for understanding the value of life (Foot 1967; Greene and Haidt 2002; Thomson 1976, 1985). They trigger intuitive justifications or unconscious, quick choices based on one’s feelings (Haidt 2001, 2003; Wheatley and Haidt 2005). However, due to their research paradigm, Fleischmann et al.’s (2019) research and Gawronski and Brannon’s (2020) study discussed the inner inclinations of moral reasoning but did not show how power guides the final moral choices in contexts.

Thus, it is still uncertain how power affects deontology/utilitarian choices during moral judgments. Do the preferences for moral thinking styles between rule-based thinking and outcome-based thinking equal the choices between deontological and utilitarian judgments? Meanwhile, many dilemmas involve harm to life, so it is necessary to explore if harming varies the moral thinking styles of the powerful and the powerless. Discovering these will be informative about the effect and scope of the influence of power on moral judgments.

One way to examine whether physical harm modifies the relationship between power and moral thinking style is to compare the dilemmas with different targets, such as man vs. object. People across lifespans and cultures agree that it is wrong to violate others’ ownership rights (Belk 1991; Friedman and Ross 2011; Rochat 2011; Rossano et al. 2011; see also Millar et al. 2014). “Judgments about the acceptability of damaging owned property also demonstrate the conflict of deontology and utilitarianism as judgments about physically harming people” (Millar et al. 2014). Comparing the acceptability of action when the target is a man or an object could be a possible way to examine the role of physical harm.

We assumed that the presence of physical harm may give rise to a boundary effect on how power influences moral reasoning. When the target is an object, the dilemma has similar structures to the daily life dilemmas used by Lammers and Stapel (2009). That is, no physical harm exists, and no higher disapproval intuitions are aroused. Then, we assumed that the relationship between power and moral reasoning should be consistent with the findings in Lammers and Stapel’s (2009) study. Then, if the presence of harm triggers more deontological reasoning, and power-holders have ready-established deontological reasoning evident in dilemmas without harm, they should retain deontological reasoning in dilemmas with harm. That is, people in high-power positions may only change marginally their judgments as a function of harm of the dilemmas. However, as discussed, people who lack power should shift towards deontology when serious harm is involved (Greene et al. 2001; Hauser et al. 2007; Waldmann and Dieterich 2007). Consequently, the presence of physical harm may lead to a boundary effect on how power influences moral reasoning. This hypothesis is reinforced by evidence showing that power decreases distress and compassion in the presence of another’s suffering (Van Kleef et al. 2008) and decreases perspective taking (Galinsky et al. 2008) and attention to individuating information of other people (Fiske 1993; Guinote and Phillips 2010; for a review, see Guinote 2017).

To summarize, Lammers and Stapel’s (2009) findings should replicate dilemmas without harm but not in dilemmas in the presence of harm. Physically harming others should prompt deontological responses among powerless individuals, which would nullify power differences.

## 6. Culture

The role of culture was also examined in this article. Moral reasoning involving harm, such as in the classical trolley dilemma, is similar across cultures (e.g., Hauser et al. 2007; O’Neill and Petrinovich 1998). However, differences have emerged in less extreme dilemmas. For instance, Chinese children considered that breaking rules (lying) when this could help the group but harm an individual was less negative compared with Canadian children (Fu et al. 2007). Eastern people are also more likely than Western people to follow authority, loyalty, and purity rules (Graham et al. 2011). Therefore, it is informative to compare moral reasoning across cultures using dilemmas that do not involve harm to examine the generalizability of the relationship between power and moral thinking styles.

In addition, power affects individuals differently across cultures. Eastern countries are more collectivist compared with Western ones. In Western societies, power is regarded as an opportunity for the pursuit of goals, such as personal desires. In contrast, in Eastern societies, power is considered to be a responsibility (Guinote 2017). It is important to investigate whether power affects moral reasoning in Eastern (Asian) countries in the way it does in Western countries, given that moral reasoning in Eastern societies is affected by concerns for the responsibility of all members.

## 7. The Present Research

Four studies were conducted. To help establish the replicability and validity of the effects of power on moral judgments in the absence of harm to life, we first performed an exact replication of a study conducted by Lammers and Stapel (2009; Study 3a), and this experiment was followed up by a similar study in an organizational context in China (Studies 1 and 2). Studies 3 and 4 compared how power affects moral thinking style in classical sacrificial dilemmas with harm (the targets are men) versus dilemmas without harm (the targets are objects). The scenarios were versions adapted from commonly used dilemmas (e.g., the footbridge and the trolley dilemma) (Hauser et al. 2007; Greene et al. 2008).

### 7.1. Study 1

Study 1 replicated Study 3a by Lammers and Stapel (2009). Participants first recalled a past event in which they had power over someone or someone had power over them (Galinsky et al. 2003). Subsequently, they were presented with a medical moral dilemma and were invited to make judgments regarding deontological and utilitarian options.

#### 7.1.1. Participants and Design

A total of 99 participants (53 female, 46 male,  $M_{age} = 32.61$ ,  $SD_{age} = 10.40$ ) were recruited from a departmental pool and were compensated GBP 1 for participation. Sample sizes were calculated according to the effect size ( $f = 0.27$ ) of the original study with a desired power level of  $p = 0.80$  (Cohen 1988) and a desired alpha error probability of  $p = 0.05$ . There were 53 participants in the high-power condition and 46 participants in the low-power condition. Participants were randomly assigned to 1 of 2 (high vs. low power) conditions. Data were collected via a Qualtrics questionnaire.

#### 7.1.2. Procedure

Participants' sense of power was manipulated first. They were asked to recall an episode in which they had power over another individual or individuals, or someone else had power over them, and to write a narrative essay about what happened and how this made them feel. Subsequently, participants were presented with a moral dilemma.

Although the man will not notice any problems or suffer any inconveniences from the disease, it is sure that he will die within 6 to 9 months. No cure is possible and nothing can be done to help the man. Accidentally, the girlfriend of the young man hears the diagnosis before her boyfriend. She begs Doctor Lawrence to wait to inform her friend. She explains that her friend always wanted to visit Africa and that they recently booked a trip together. Given that the man will die anyway, that no cure exists, and that he will not suffer from it, the girlfriend insists that her boyfriend is better off if the doctor informs him after the holiday. The rules and regulations of the hospital, however, require doctors to inform patients as soon as possible (Lammers and Stapel 2009, p. 283).

At the end of the moral dilemma, participants were asked "What should Doctor Lawrence do?" Participants indicated their answer on a 9-point scale from 1 (*Wait until after the holiday; utilitarian option*) to 9 (*inform the patient directly; deontological option*). Finally, participants provided demographic information, were debriefed, and thanked.

### 7.1.3. Results and Discussion

A one-way ANOVA analysis that tested the effect of power on the moral decision in the medical dilemma showed a significant effect,  $F(1, 97) = 4.99$ , 95%  $CI_{High}$  [6.20, 7.73] and 95%  $CI_{Low}$  [4.87, 6.52],  $p < 0.05$ ,  $\eta^2_p = 0.049$ . Participants in the powerful condition ( $M = 6.96$ ,  $SD = 2.48$ ) were more likely to follow the deontological moral choice, that is, more likely to tell the patient his illness directly than those in the powerless condition ( $M = 5.70$ ,  $SD = 3.15$ ), who tended to want to inform the patient after his holiday.

This study successfully replicated Lammers and Stapel's (2009) Study 3a. High-power individuals were more inclined to use deontological judgments, while low-power individuals were more likely to use utilitarian judgments. However, the effect size here ( $\eta^2_p = 0.049$ ) was much smaller than that in the original study ( $\eta^2_p = 0.27$ ).

This result was obtained when participants' power was manipulated in a subtle way (participants recalled a past event in which they had power or were powerless). Furthermore, participants were students with little experience with power. Given these potential limitations in the scope of power, the next study extended the ecological validity of the sense of power and moral reasoning manipulations using employees in organizational settings whose power varied because of their position in the organization.

## 7.2. Study 2

This study examined the association between power and moral thinking style in a natural setting and in a different culture (China). Participants were employees of a governmental organization or one of three private companies.

### 7.2.1. Participants and Design

Participants were recruited from the government department of Zhengzhou and three private sector organizations in Guangzhou and Hangzhou in mainland China. A total of 253 employees were invited to complete a questionnaire, of which 196 completed the questionnaires (response rate was 77.47%). Sample sizes ( $n = 156$ ) were calculated for detecting a medium ( $f = 0.27$ ) effect with a desired power level of  $p = 0.80$  (Cohen 1988) and a desired alpha error probability of  $p = 0.05$ , based on Lammers and Stapel (2009). However, as we need to collect data within organizations for this study and determine participants' power groups based on their self-reported sense of power in organizations, it is not possible to determine the exact number of participants in each group before collecting data, so we collected additional data based on the initial calculation of 156 people by G\*power. The final completed and valid data consisted of 196 individuals.

Participants were divided into two groups (high-power vs. low-power) according to their actual roles in the organization. Power was established by asking "Do you have subordinates?" People with one or more subordinates were designated as high power, and people with no subordinates constituted the low-power group. Demographic information about participants is given in Table 1.

Age and work time differences occurred across power groups and organizational type. T-tests showed that the high-power group (people with subordinates) was significantly older ( $t(194) = 9.22$ ,  $p < 0.001$ ,  $d = 1.31$ ) and worked significantly longer ( $t(194) = 8.56$ ,  $p < 0.001$ ,  $d = 1.18$ ) than the low-power group (those without subordinates). Participants in government were also significantly older ( $t(194) = 6.24$ ,  $p < 0.001$ ,  $d = 0.62$ ) and worked significantly longer ( $t(194) = 4.39$ ,  $p < 0.001$ ,  $d = 0.86$ ) than those in private companies. These variables are controlled for in the statistical analyses.

**Table 1.** Sample size, gender, age, and work time (month) of the sample in Study 2.

Group	n	Female	$M_{age}$ (SD)	$M_{work-time}$ (SD)
Government				
High power	40	21	44.28 (6.46)	223.35 (110.07)
Low power	39	21	30.36 (6.48)	65.10 (81.14)
Total	79	42	37.41 (9.51)	145.23 (124.92)
Companies				
High power	42	16	35.52 (6.69)	94.52 (82.24)
Low power	75	39	30.45 (6.29)	41.46 (39.24)
Total	117	55	32.27 (6.68)	60.51 (63.45)
Total				
High power	82	37	39.79 (7.88)	157.36 (116.00)
Low power	114	60	30.42 (6.33)	49.55 (57.87)
Total	196	97	34.34 (8.40)	94.66 (101.85)

### 7.2.2. Procedure

Participants volunteered to take part in a short survey. First, participants were asked several questions about their professional background. Examples included, “For how long time (months) have you been working in this organization?”, “What is your role in the company?”, “Do you have subordinates?” Responses primed participants to think about their sense of high/low power in the organization. Then, participants read the moral dilemma and were asked “If one employee in your organization fitted the following situation, what would you think?”

Li Ming is an employee in the company, and he is also a father of a 3-year-old child. Because the work in his department is related to confidential information of the company, the company forbids employees from working at home. However, on this day, there are no other family members who can take care of his child, and Li Ming has a deadline to catch up with. The work is urgent, so Li Ming decides to take his work home to do at the same time as taking care of his child.

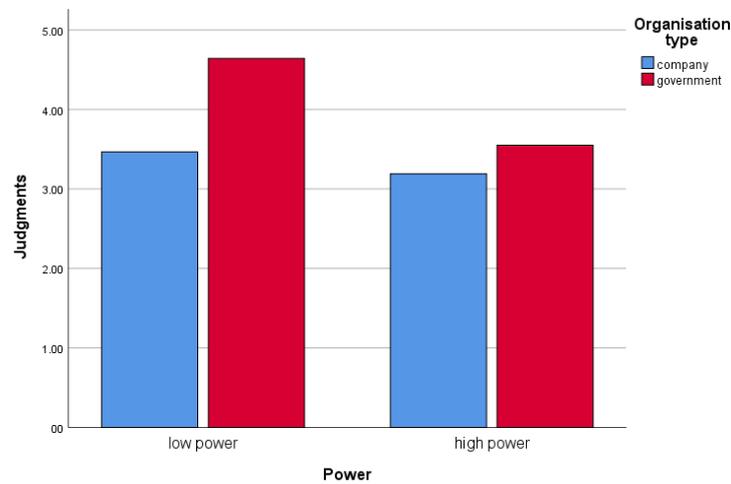
At the end of this dilemma, participants were asked to what extent it was appropriate for Li Ming to take work home. They rated the action on a 9-point scale from 1 (*definitely NOT; deontological judgment*) to 9 (*definitely YES; utilitarian judgment*).

The moral judgment task was followed by two sets of statements to assess the perceived value of the organizations. Four statements focused on rule-based values of the organization ( $\alpha = 0.82$ ) (e.g., “Thinking about the explicit or implicit norms at work, people in similar positions as you mostly think that it is important to follow them strictly.”) and another four questions were related to product-based values ( $\alpha = 0.80$ ) (e.g., “People in similar positions as you think that organizational profit is important for both the organization and individuals in it.”). Participants chose from 1 (*totally disagree*) to 9 (*totally agree*) to give opinions on what features are valued in their organizations. Finally, participants provided demographic information.

### 7.2.3. Results and Discussion

Age and work time were controlled for in the analyses, because these factors differed across power groups. A 2 (power: high vs. low power)  $\times$  2 (organization type: government vs. company) ANOVA on the moral decision about whether Li Ming should take work home yielded a significant main effect of power on moral judgment,  $F(1, 192) = 4.34$ ,  $p < 0.05$ ,  $\eta^2_p = 0.022$ . As shown in Figure 1 and Table 2, high-power participants were more likely to think that Li Ming should follow the rule of the company and should not take work home than low-power participants. The main effect of organization type,  $F(1, 192) = 1.90$ ,  $p = 0.17$ , and the interaction with the power group were not significant,  $F(1, 192) = 2.00$ ,  $p = 0.16$ . The same result of power on moral judgments occurred when age and work time were not controlled for,  $F(1, 192) = 3.92$ ,  $p < 0.05$ ,  $\eta^2_p = 0.020$ . Neither the product-oriented values ( $\beta = 0.018$ ,  $t = 0.24$ , 95% CI  $[-0.20, 0.26]$ ,  $p = 0.81$ ) nor the rule-oriented values

( $\beta = 0.011, t = 0.15, 95\% \text{ CI } [-0.21, 0.24], p = 0.88$ ) of organizations were related to moral decision making.



**Figure 1.** Moral judgments of participants in different power groups and different types of organisations in Study 2.

**Table 2.** Mean scores and 95% confidence intervals of moral judgments of leaders and subordinates from different organizations in Study 2.

Organization Type	n	High Power		Low Power		
		M (SD)	95% CI	n	M (SD)	95% CI
Government	40	3.55 (2.22)	[2.22, 4.20]	39	4.64 (2.59)	[3.91, 5.51]
Companies	42	3.19 (2.33)	[2.45, 3.95]	75	3.47 (2.51)	[3.00, 4.22]
Total	82	3.37 (2.27)	[2.58, 3.83]	114	3.87 (2.59)	[3.63, 4.68]

Note. High values mean utilitarian moral judgments.

These results are consistent with the results of Study 1, showing that not only temporarily induced power but also power roles in different organizational contexts affect moral reasoning. Power holders were more inclined to rely on deontological moral thinking to make judgments, while powerless individuals were likely to use utilitarian moral thinking.

### 7.3. Study 3

Our first goal in Study 3 was to investigate whether the presence of harming others modifies how powerful and powerless people reason regarding moral issues by comparing when the targets in dilemmas are men and sculptures. Secondly, it is not known whether power or powerlessness affects moral reasoning. To explore this issue, a control condition was included in this study.

#### 7.3.1. Method

**Participants and design.** A total of 214 students (140 female, 74 male,  $M_{age} = 25.09, SD_{age} = 9.55$ ) were recruited from the departmental pool. All participants received GBP 1.50 compensation for participation. Sample sizes ( $n = 206$ ) were calculated for detecting a medium ( $f = 0.25$ ) effect with a desired power level of  $p = 0.90$  (Cohen 1988) and a desired alpha error probability of  $p = 0.05$  based on Lammers and Stapel (2009). The experiment involved a 3 (power: high power, low power, and control group)  $\times$  2 (dilemma type: harm vs. no harm) between-participants design. The main research aim was to determine whether there are differences between participants in high-power and low-power conditions, as per the predictions; the control group was also compared with the experimental groups to check for any effects specific to the treatment groups. The assignment of participants to

groups was random. The experiment was based on the existing online survey development environment Qualtrics.

**Materials.** The classic sacrificial footbridge moral dilemma was used (Hauser et al. 2007, p. 6). In the story (sacrificial condition), the protagonist needs to choose whether to push a man down from a footbridge onto a trolley in order to save five persons on the train track. In the no-harm version, the victim was an inanimate object—a sculpture—and the five persons were substituted by five sculptures. A pilot study indicated that this manipulation affected the deontological (vs. utilitarian) judgments made by participants.

When the targets were men (in the presence of physical harm), the dilemma was as follows:

Frank is on a footbridge over the train tracks. He sees a train approaching the bridge out of control. There are five people on the track. Frank sees that the driver of the train slammed on the brakes, but the brakes failed. The train is now rushing toward the five men. It is moving so fast that they will not be able to get off the track in time. Frank knows that the only way to stop this out-of-control trolley is to drop a very heavy weight into its path. But the only available, sufficiently heavy weight is 1 large man, also watching the train from the footbridge. Frank can shove the man onto the track in the path of the trolley, preventing the train from killing the five men but killing the one man; or, he can refrain from doing this, letting the five die (Hauser et al. 2007, p. 6).

When the targets were sculptures (in the absence of physical harm), the dilemma was as follows:

Tom is on a footbridge over the train tracks. He sees a train approaching the bridge out of control. There are five sculptures (belonging to unknown someone) on the track. Tom sees that the driver of the train slammed on the brakes, but the brakes failed. The train is now rushing towards the five sculptures. Tom knows that the only way to stop this out-of-control train is to drop a very heavy weight into its path. The only available, sufficiently heavy weight is another sculpture. However, this sculpture belongs to a passerby. He went to the toilet and asked Tom to help him to look after his sculpture. Tom can push the sculpture onto the track in the path of the train, preventing the train from destroying the five sculptures but destroying the one sculpture; or, he can refrain from doing this, letting the five sculptures be destroyed.

### 7.3.2. Procedure

After participants volunteered to take part, they were linked to the Qualtrics survey. To manipulate power, participants first completed a written role simulation task (Guinote 2008). They were asked to imagine themselves in an organizational role as vividly as possible and to describe what a typical day in their life would be if they were that person. Participants read information about the organization and their roles. Participants in the high-power condition read that they would be in the role of a Managing Director in a Marketing Organization, while those in the low-power condition were assigned an Employee's position in the same Marketing Organization. Participants used around 10 min to plan a workday. Participants in the control group did not complete the role simulation task but made moral decisions directly. The experimenter was unaware of the participants' power conditions.

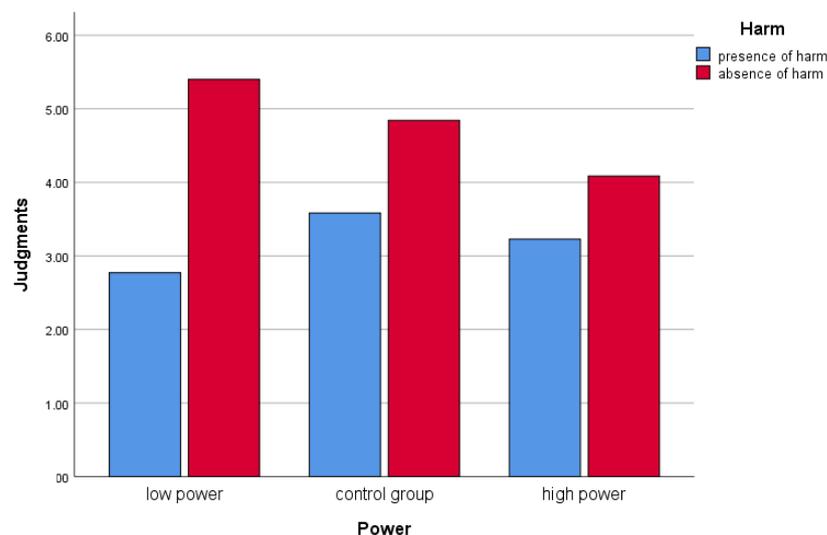
Upon completion, participants in the high- and low-power conditions rated three questions ( $\alpha = 0.957$ ) on 9-point scales to check whether the manipulation of the sense of power was successful. The questions included "I feel I can influence others", "I feel I have a great deal of power in the situation", "I am dominant in the situation".

Subsequently, they took part in what was, allegedly, a separate study, and they were presented with one of the two types of moral dilemmas. They were invited to indicate whether the suggested action was morally acceptable or not on a 9-point scale from 1 (*definitely NOT; deontological option*) to 9 (*definitely YES; utilitarian option*). Finally, participants provided demographic data, checked for suspicions, and were debriefed.

### 7.3.3. Results and Discussion

A 2 (power) × 2 (harm) ANOVA showed that the main effect of power on the power manipulation check questions was significant,  $F(1, 136) = 116.58$ , 95%  $CI_{High}$  [7.08, 7.92] and 95%  $CI_{Low}$  [3.81, 4.66],  $p < 0.001$ ,  $\eta^2_p = 0.462$ . The main effect of dilemma type was not significant,  $F(1, 136) = 1.02$ ,  $p = 0.32$ , and the interaction between power and dilemma was not significant,  $F(1, 136) = 0.12$ ,  $p = 0.73$ . Participants in the high-power condition felt more powerful (i.e., more in control over the situation and more influential) ( $M = 7.50$ ,  $SD = 1.13$ ) relative to those in the low-power condition ( $M = 4.23$ ,  $SD = 2.26$ ). Harm did not affect participants' power experiences.

The main predictions focused on differences between participants in the powerful and powerless conditions, where the control group should fall somewhere in between. To test this, a 2 (Power) × 2 (Harm) ANOVA was conducted on the permissibility of pushing the one man/sculpture onto the track in the footbridge dilemma. This yielded a significant main effect of harm to life,  $F(1, 136) = 17.52$ ,  $p < 0.001$ ,  $\eta^2_p = 0.114$ . As expected, participants were more inclined to judge that it is morally acceptable to push the one item (utilitarian judgment) in the dilemma in the absence of harm compared with the dilemma when harm was present (see Figure 2 and Table 3). The main effect of power was not significant,  $F(1, 136) = 1.06$ ,  $p = 0.305$ . There was, however, a significant interaction between power and the presence of harm on moral judgment,  $F(1, 136) = 4.52$ ,  $p < 0.05$ ,  $\eta^2_p = 0.032$ .



**Figure 2.** The interaction effect of power and harm on moral judgments in Study 3.

**Table 3.** Mean scores and 95% confidence intervals and *t*-test analyses of moral judgments of participants in different experimental groups in Study 3.

Power Condition	Harm		No Harm		<i>t</i>	df	<i>p</i>
	n	<i>M</i> ( <i>SD</i> ) 95% CI	n	<i>M</i> ( <i>SD</i> ) 95% CI			
High power	35	3.23 (2.39) [2.39, 4.07]	35	4.09 (2.59) [3.25, 4.93]	−1.44	68	0.16
Control group	36	3.58 (2.31) [2.79, 4.38]	38	4.84 (2.47) [4.07, 5.62]	−2.26	72	<0.05
Low power	35	2.77 (2.40) [1.95, 3.59]	35	5.40 (2.46) [4.58, 6.22]	−4.52	68	<0.001

It can be seen from Table 3 and Figure 2 that participants in the high-power group showed no difference in moral judgments between the dilemma of harm and the dilemma of no harm. They tended not to push the one man/sculpture from the bridge,  $t(68) = -1.44$ ,

$p = 0.16$ . In contrast, both participants in the low-power group,  $t(68) = -4.52$ ,  $p < 0.001$ ,  $d = 0.53$ , and the control group,  $t(72) = -2.26$ ,  $p < 0.05$ ,  $d = 1.08$ , were more inclined to choose to push the sculpture to save five sculptures (more utilitarian moral choice) in the dilemma without harm than to push the man in the dilemma with physical harm.

These results show that individuals with low power and control groups tend to make more utilitarian choices in scenarios involving harm compared with dilemmas not involving harm. However, high-power individuals do not show difference in their choices in these two types of scenarios. Also, the addition of a control condition revealed that the effects reported previously derive from having power, rather than from lacking power.

#### 7.4. Study 4

Study 3 provided support for the notion that power increases preference for deontology, and it showed a boundary condition for power differences as a function of the type of dilemma. Study 4 aimed to replicate these findings with a different, commonly used dilemma—the trolley dilemma (Thomson 1986). The trolley dilemma is also a sacrificial dilemma, where participants need to choose whether to throw a switch to change the direction of a train to kill one person and save five. It differs from the footbridge dilemma in terms of the personal involvement of the actor (Foot 1967; Thomson 1986). Sacrificial dilemmas can be classified into two categories: personal dilemmas and impersonal dilemmas. In personal dilemmas, such as the footbridge, the actor directly hurts other person(s) by touching the person (the actor pushes the victim down by hand) in order to achieve greater benefits. In impersonal dilemmas, such as the trolley dilemma, the victims are not hurt directly by the actor but by an agent (the actor throws the switch to change the direction of the trolley) (Moore et al. 2008; Royzman and Baron 2002). Research suggests that personal harm to life elicits the use of intuition, thereby enhancing deontological reasoning compared with dilemmas involving impersonal hurt (Greene and Haidt 2002; Greene et al. 2001, 2004). It is therefore possible that the insignificant results in Study 3 when harm was present were driven by personal involvement rather than harm to life per se. To rule out this possibility, an impersonal dilemma—the trolley dilemma—was used in Study 4.

##### 7.4.1. Methods

**Participants and design.** A total of 145 students (76 female, 69 male,  $M_{age} = 25.03$ ,  $SD_{age} = 6.25$ ) were recruited from various survey websites (departmental participants pool, “Call for participants”, and “Prolific Academic”). All participants were paid GBP 1.50. Sample sizes were calculated according to the effect size ( $f = 0.27$ ) of Study 3a in Lammers and Stapel’s (2009) research, with a desired power level of  $p = 0.90$  (Cohen 1988) and a desired alpha error probability of  $p = 0.05$ . Participants were randomly assigned to one of four conditions determined by a 2 (Power: high vs. low)  $\times$  2 (Dilemma type: harm vs. no harm) between-participants design. The experiment was based on the existing online survey development environment Qualtrics.

**Materials.** The trolley dilemma was adapted from the most common impersonal sacrificial dilemma (see Hauser et al. 2007).

The dilemma reads as follows:

Ned is walking near the train tracks when he notices a train approaching out of control. Up ahead on the track are five people/sculptures (belonging to an unknown individual). Ned sees that the driver of the train slammed on the brakes, but the brakes failed. The train is now rushing toward the five men/sculptures. It is moving so fast that they will not be able to get off the track in time. Ned is standing next to a switch, which he can throw, that will temporarily turn the train onto a side track out of use. There is a heavy object on the side track. If the train hits the object, the object will stop the train, thereby saving the five men/sculptures on the main track. Unfortunately, the heavy object is another man/sculpture, standing on the side track with his back turned (p. 6).

Half of the participants read the harm version: The man is blind and the person who takes care of him went to the toilet and asked for Ned's help to look after the man for a little while. In this case, Ned can throw the switch, preventing the train from killing the five men but killing the one man. Or, he can refrain from doing this, letting the five die.

The remaining participants read the no-harm version: In this version, the sculpture belongs to a passerby who went to the toilet, put his sculpture on the unused side track, and asked Ned to help him look after his sculpture for a little while. Now, Ned can throw the switch, preventing the train from destroying the five sculptures but destroying the one sculpture. Or, he can refrain from doing this, leaving the five items to be destroyed.

#### 7.4.2. Procedure

Once participants agreed to take part, they were linked to a Qualtrics survey. Power was manipulated by asking participants to recall an episode, in which they had power over another individual or individuals, or someone else had power over them. They wrote a narrative paragraph about what happened and how this made them feel, following Galinsky et al. (2003). After completing the power manipulation, participants completed the same manipulation check as in Study 3 ( $\alpha = 0.942$ ). Then, participants read one of the two types of moral dilemmas. At the end, they were asked "To what extent is it appropriate for you to throw the switch?" (9-point scale from 1, *definitely NOT; deontological option*, to 9, *definitely YES; utilitarian option*). Finally, participants provided demographic data, were checked for suspicions about the experiment, and were debriefed.

#### 7.4.3. Results and Discussion

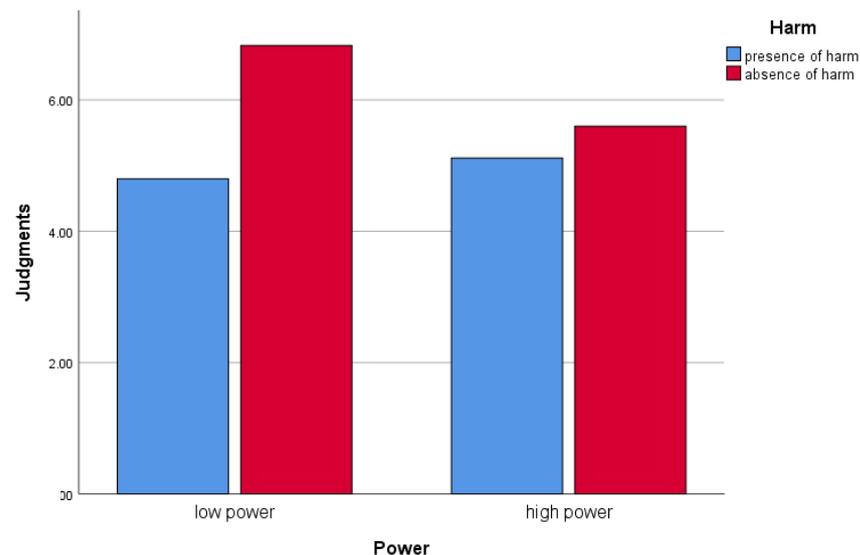
First, it was checked whether the manipulation of the sense of power was successful. A 2 (Power)  $\times$  2 (Harm) ANOVA analysis showed that the main effect of power was significant,  $F(1, 141) = 234.04$ , 95%  $CI_{High}$  [6.43, 7.19] and 95%  $CI_{Low}$  [2.35, 3.08],  $p < 0.001$ ,  $\eta^2_p = 0.62$ , while neither the main effect of harm,  $F(1, 141) = 0.18$ ,  $p = 0.67$ , nor the interaction effect  $F(1, 141) = 0.99$ ,  $p = 0.32$ , were significant. Participants in the high-power condition felt more powerful, with more control over the situation and more influence over others ( $M = 6.81$ ,  $SD = 1.56$ ) relative to those in the low-power condition ( $M = 2.72$ ,  $SD = 1.64$ ). Harm did not affect participants' power experiences.

A 2 (power: high vs. low)  $\times$  2 (dilemma type: harm vs. no harm) ANOVA tested the acceptability of throwing the switch in the trolley dilemma. This yielded the expected significant main effect of harm,  $F(1, 141) = 11.61$ ,  $p < 0.01$ ,  $\eta^2_p = 0.076$ . People were more likely not to throw the switch to kill one and save five (i.e., to make deontological moral judgments) in the dilemma in the presence of impersonal harm compared with those without harm. The main effect of power was not significant,  $F(1, 141) = 1.54$ ,  $p = 0.22$ . However, there was a significant interaction between power and harm on moral judgment,  $F(1, 141) = 4.37$ ,  $p < 0.05$ ,  $\eta^2_p = 0.030$ . As shown in Table 4 and Figure 3, in the dilemma without harm, participants in the high-power group tended to make more deontological moral choices compared with participants in the low-power group,  $t(68) = -2.70$ ,  $p < 0.01$ ,  $d = 0.64$ . However, in the dilemma with impersonal harm, there was no difference in moral choices between high-power group participants and low-power group participants in the moral dilemma that involves impersonal harm,  $t(73) = 0.55$ ,  $p = 0.58$ . There was no significant difference in the choices made by high-power group participants in moral dilemmas involving and not involving impersonal harm,  $t(68) = 0.87$ ,  $p = 0.39$ , while participants in low-power groups tended to make more utilitarian moral choices in dilemmas involving physical harm compared with nonharm dilemmas,  $t(73) = 4.15$ ,  $p < 0.001$ ,  $d = 0.97$ .

**Table 4.** Mean scores and 95% confidence intervals of moral judgments of participants in different experimental groups in Study 4.

Power Condition	Harm			No Harm		
	n	M (SD)	95% CI	n	M (SD)	95% CI
High power	35	5.11 (2.55)	[4.37, 5.86]	40	5.60 (2.08)	[4.86, 6.34]
Low power	35	4.80 (2.40)	[4.11, 5.49]	35	6.83 (1.72)	[6.09, 7.57]
Total	70	4.95 (2.46)	[4.45, 5.46]	75	6.21 (1.99)	[5.69, 6.74]

Note. High values mean utilitarian moral judgments.

**Figure 3.** The interaction effect of power and harm on moral judgments in Study 4.

This study confirmed the boundary condition about the link between power and moral judgments in an impersonal sacrificial dilemma (trolley dilemma). This finding is consistent with the situation in the personal sacrificial dilemma (footbridge dilemma) in Study 3. Individuals with low power tend to make more utilitarian choices in moral dilemmas involving harm compared with dilemmas not involving harm. Nevertheless, high-power individuals do not show differences in their choices in these two types of scenarios. The preference for utilitarian decisions of low-power individuals, compared with high-power individuals, only occurs in moral dilemmas that do not involve harm to other people. The different moral thinking styles of high-power and low-power individuals vanished when faced with an impersonal sacrificial dilemma with harm.

Due to previous research suggesting differences in moral judgments between personal and impersonal dilemmas (Greene et al. 2001, 2004), we aim to further investigate through Experiment 4 to determine whether it is the harm that causes the boundary effects of power on moral judgments or if it is the personalness that causes such effects. Given that in the current research, we found a similar boundary condition, we think that it is the harm, rather than personalness, that triggers the boundary effects of power on moral judgments. This finding is also consistent with Haidt's moral foundation theory (Graham et al. 2009, 2011), which treats harm/care as one of the most important and basic foundations of human morals related to human intuition.

## 8. General Discussion

Four studies examined how physical harm in dilemmas modifies the association between power and moral reasoning. First, two studies examined a previous finding showing that possession of power triggers deontological moral reasoning (Lammers and Stapel 2009). They were exact and conceptual replications in experimental and naturally

occurring settings in Europe and China. Then, this research extended past research by considering the presence or absence of harm to life. The physical harm in dilemmas was studied by setting whether the targets were men or objects (sculptures) with ownership (Millar et al. 2014). We tested this because dilemmas in the presence of harm elicited intuition and decreased systematic thinking (e.g., Greene et al. 2001), and people without power would decrease their utilitarian moral thinking in dilemmas with harm compared with those without harm. In contrast, powerful individuals already tended to rely on deontological moral thinking in dilemmas without harm, and they would not change their moral thinking style. These studies showed that power increases deontological moral thinking styles in dilemmas in the absence of harm. This association between power and deontological moral thinking style, however, does not occur in dilemmas in the presence of physical power via intuition elicited by harm.

Study 1 was a successful exact replication of the original study (Study 3a in Lammers and Stapel 2009), showing that having power leads to a preference for a deontological (rule-based) moral thinking style, and lacking power leads to a preference for a utilitarian (outcome-based) moral thinking style. In Study 2, the original paradigm and procedure were administered to a sample of participants from organizational environments in China. This showed that the proposed link between power and moral thinking style can be generalized to natural settings and different cultures. Studies 3 and 4 utilized dilemmas with conflict of deontology and utilitarianism in the conditions in which physical harm was presented or absent. The results show a moderating role of the presence of harm. Power only affected moral reasoning in dilemmas when harm to life was absent. When harm was presented, the differences between the powerful and the powerless were eliminated. Meanwhile, by adding a control group, Study 3 showed that the different judgments of the powerful, the powerless, and the control people were specifically caused by having power. Lacking power did not affect moral reasoning compared with the control condition, while the possession of power increased deontological moral reasoning in dilemmas without harm.

The findings discussed how the presence of harm affects the relationship between power and moral choices and extend the understanding of how power affects moral reasoning in different moral contexts. This research found boundary conditions for the effects of power on moral reasoning. Four studies examined how people in powerful and powerless conditions make judgments in sacrificial dilemmas. The results suggest that there is a limited scope of the influence of power on moral thinking style when harm to life is present. Differences in moral thinking styles between the powerful and the powerless are limited to daily life dilemmas. Under sacrificial dilemmas, people who do not have power change their thinking style towards deontology.

The powerful were more inclined not to violate the ownership of sculptures and not to choose to sacrifice the one sculpture that they promised to help take care of compared with people without power. This finding is consistent with previous findings about the association between high power and rule-based thinking (Lammers and Stapel 2009). Lammers and Stapel (2009) put their focus on the choice between rules or regulations set by a specific person or organization (e.g., the teacher, and the hospital), while the rule in the current study is about not violating ownership. The choice between violating ownership and the greater benefits is also a good way to study the conflict between deontology and utilitarianism (Millar et al. 2014).

Meanwhile, research has found that power does not influence individuals' moral choices in classical sacrifice scenarios (the footbridge dilemma and the trolley dilemma). This finding is not contradictory to Fleischmann et al. (2019). In their study, the sense of power was not significantly correlated with utilitarian and deontological thinking inclinations but rather influenced them through four moral orientations in different directions. Our study found that harm eliminated the differences in moral choices between high- and low-power individuals. This may be due to the fact that in sacrifice scenarios, power

simultaneously affects both utilitarian and deontological thinking, causing the two effects to cancel each other out and thus not influencing the final moral choice.

Research has found differences compared with the study by [Gawronski and Brannon \(2020\)](#). Their study found that inducing high (vs. low) power by recalling a personal experience reduces sensitivity to norms, whereas being assigned to a social role involving high (vs. low) power enhances sensitivity to norms. This may be due to the different moral paradigms used in the studies. In our study, we examined how power influences individuals' final moral choices using a single traditional sacrificial moral dilemma, while [Gawronski and Brannon's \(2020\)](#) study was based on the CNI model's moral dilemma paradigm, comparing individuals' choices in four different types of moral dilemmas to calculate three parameters: (1) sensitivity to consequences, (2) sensitivity to moral norms, and (3) general preference for inaction versus action regardless of consequences and norms.

The association between power and moral thinking style examined in this article is also consistent with the intuitionist moral model ([Haidt 2001](#)) and dual-process moral judgment theory ([Greene 2009](#); [Greene et al. 2009](#)). This model claims that moral thinking is not stable; it is affected by various contextual cues, and people rely on intuition or elaborative reasoning to think about moral events depending on context.

In all these studies, how power affects moral judgments was tested with one dilemma. This design is consistent with [Lammers and Stapel's \(2009\)](#) research and is also typical in moral judgment research (e.g., [Millar et al. 2014](#); [Valdesolo and DeSteno 2006](#)). However, the studies conducted by [Fleischmann et al. \(2019\)](#) and [Gawronski and Brannon \(2020\)](#) utilized a pre-existing series of moral dilemmas, employing the process dissociation paradigm and the CNI model, respectively. We did not choose to use multiple moral dilemmas in every single experiment because we found that the manipulation of the sense of power did not last very long, and the dependent variables should be measured very quickly in a pilot study. The dependent variables in other studies with power manipulation were also simple and short (e.g., [Galinsky et al. 2003](#); [Guinote 2008](#)). Thus, we chose the one-scenario design to guarantee that moral judgments were indeed affected by the manipulation of power. Using a single-dilemma design may sacrifice the variation of scenarios. We were not able to study if power affects moral judgments in the same way in different dilemmas. To avoid this limitation, various dilemmas were included in different studies.

In the Introduction, we discussed the difference between power and a sense of power. Studies 1 and 4 manipulated the sense of power by recalling tasks, Study 3 used role simulation task to manipulate power, and in Study 2, we also divided participants into high- and low-power groups based on the sense of power they experienced in their actual work environment. Under these manipulation and categorization, we found that individuals' sense of power can influence moral judgments. In [Lammers and Stapel's \(2009\)](#) study, they also manipulated power through a recalling task. [Fleischmann et al. \(2019\)](#) found a correlation between a sense of power and utilitarian and deontological inclinations by measuring personal senses of power. These two studies show the effects of a sense of power on moral judgments and moral reasoning. Our findings are consistent with theirs.

[Gawronski and Brannon \(2020\)](#) investigated the differential effects of recalling and role-playing tasks on moral thinking. This suggests that individuals can be influenced in their subsequent cognition and behavior when they have concrete power to control others, as well as when they experience a sense of power through recall. However, the direction of these influences may vary. [Gawronski and Brannon's \(2020\)](#) research focused on the internal thought processes of moral reasoning, while our study focused on the choice outcomes in moral scenarios. Due to the varying effects observed from different methods of power manipulation, further research is needed to investigate whether the impact of power on moral judgments remains consistent when individuals are given actual authority to control others compared with when their sense of power is manipulated through recall and imagination tasks.

This research has several limitations and future research possibilities. First, this research only discussed the association between power and moral reasoning in cases

with/without harm to life. It would be informative to investigate the role of harm continuously, with different levels of intensity. In addition, there are also several factors that influence moral reasoning and were not investigated in the present research. For example, the side effects of moral decisions have implications, for instance, the cost of the means used to enhance the greater good (Hauser et al. 2007; Thomson 1976, 1985) and ownership rights (Millar et al. 2014). Also, Studies 3 and 4 discussed the effect of the presence of harm or not by the contrast between a human and a sculpture, but this might also lead to differences in the cost of actions. Stronger utilitarian judgments might result not from the absence of physical harm to another human, but from the difference in consequences—sacrificing a sculpture would lead to much less negative outcomes financially, morally, legally, and reputation-wise compared with sacrificing a human. To avoid this shortcoming, further studies can compare different types of harm. Finally, the sample sizes of the present studies were calculated based on a previous study (Lammers and Stapel 2009), but the observed effects were smaller compared with that previous study. We speculate that this may be due to cultural differences. The previous experiments were conducted in Germany, while Experiments 1, 3, and 4 were conducted in the UK, and Experiment 2 was conducted in China. Cultural differences may have contributed to this phenomenon. German culture may lead to a greater emphasis on rules among individuals in positions of power.

The present findings tested the association between power and moral reasoning in dilemmas in the presence and absence of harm. The link between power (powerlessness) and deontological (utilitarian) moral thinking was found only in the condition in which physical harm was not presented. Possession of power is attributed to this specific effect. Power-holders and powerless individuals indeed hold different moral thinking styles toward ethical issues. Differences in perspectives can create conflicts, and knowledge of the epistemological viewpoints triggered by hierarchy can be useful in managing these conflicts.

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**Informed Consent Statement:** Informed consent was obtained from all subjects involved in the study.

**Data Availability Statement:** The raw data supporting the conclusions of this article will be made available by the authors on request.

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