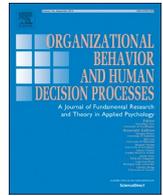




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## Power decreases the moral condemnation of disgust-inducing transgressions

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### ABSTRACT

Across seven studies (five preregistered), we show that power reduces the degree to which people morally condemn transgressions that elicit disgust. This effect is explained by power reducing the subjective experience of disgust instead of the categorization of behaviors as disgusting. Power does not reliably reduce other negative emotions besides disgust and the impact of power on disgust and moral judgment is attenuated when participants are instructed to appraise impure behaviors as dangerous. These findings challenge the idea that power always increases the severity of moral judgments, shed light on the specific mechanisms by which power colors our judgments of moral right and wrong, and expand theorizing on the impact of power on emotions and moral judgment.

### 1. Introduction

Powerful individuals such as judges, business leaders, and managers evaluate, judge, and punish others for perceived transgressions. Individuals' gut feelings are an important source of their judgments, with feelings of disgust increasing the severity of moral judgments and punishments (e.g., Chapman, Kim, Susskind, & Anderson, 2009; Horberg, Oveis, Keltner, & Cohen, 2009; Inbar, Pizarro, & Bloom, 2012; Inbar, Pizarro, Knobe, & Bloom, 2009; Olatunji, Puncochar, & Cox, 2016; Tybur et al., 2013; Wheatley & Haidt, 2005). Yet, despite a wealth of research showing that disgust affects moral judgment, it remains unclear how power affects the role of disgust in moral judgment. Does having power increase how disgusted people feel, and thereby foster the condemnation of behaviors that tend to make people feel disgusted? Or does power limit the role of disgust in moral judgment through reducing how disgusted people feel? In the present research, we propose that power reduces how disgusted people feel and that this decreases the perceived immorality of behaviors considered as "impure."

Understanding how power impacts the moral condemnation of disgust-inducing behaviors is important for several reasons. First, it sheds light on the mechanisms by which power colors our judgments of moral right and wrong and challenges the literature suggesting that power makes individuals more judgmental (e.g., Mooijman, Van Dijk,

Ellemers, & Van Dijk, 2015; Van Prooijen, Coffeng, & Vermeer, 2014; Wiltermuth & Flynn, 2013). Second, because disgust is an emotion that inhibits action (Ekman, Levenson, & Friesen, 1983), it addresses the theoretical question of whether power can also reduce inhibition tendencies (instead of only boosting approach tendencies; Keltner, Gruenfeld, & Anderson, 2003). Lastly, understanding how power impacts the moral condemnation of disgust-inducing behaviors helps us understand how judges, business leaders, and managers might "fail" to uphold purity standards compared to the wishes of the general public.

### 2. Power, the behavioral immune system, and disgust

Power entails having relative control over valuable resources that are monetary (e.g., granting others bonuses), social (e.g., including others in high-status groups), or physical (e.g., allocating desirable office spaces; Magee & Galinsky, 2008). Power is an objective aspect of a social relationship that influences an individual's subjective sense of power, which is "an individual's internal mental representation of their power in relation to others in their social environment" (Tost, 2015). For instance, people's sense of power in the workplace fluctuates during the day, depending on who they are interacting with (e.g., being a boss versus subordinate; Smith & Hofmann, 2016) and what decisions they are confronted with (e.g., decisions that highlight the ability to control others; Foulk, Lanaj, Tu, Erez, & Archambeau, 2018). Experiencing

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power means believing one can control the outcomes, experiences, or behaviors of oneself and others (Anderson, John, & Keltner, 2012; Galinsky, Gruenfeld, & Magee, 2003; Kipnis, Castell, Gergen, & Mauch, 1976) and is the proximal mechanism by which controlling resources affects individuals' attitudes, cognitions, emotions, and behaviors (Tost, 2015). Here, we focus on how this sense of power affects the role of disgust in moral judgment.

Of particular relevance to our theory is the notion that experiencing power affects how individuals react to the risk of being contaminated. Throughout the course of evolution, humans developed a behavioral immune system that consists of detecting stimuli that are potential contaminants, experiencing a disgust response that signals the need to avoid such stimuli, and in turn avoiding the stimuli (e.g., detecting, feeling repulsed by, and throwing away rotten food; Schaller & Park, 2011). When individuals feel that contamination is unlikely and risks are minimal, they experience weaker disgust responses to potentially infectious cues (because there is less need to avoid the contaminant; Fessler, Eng, & Navarrete, 2005). For instance, people feel less repulsed by rotten food when their immune system is relatively strong (Schaller, Park, & Kenrick, 2007) and people experience less disgust when they reappraise sexual acts as not contagious and thus not dangerous to them (Mooijman & Van Dijk, 2015; Mooijman & Stern, 2016).

Our hypothesis that having power reduces disgust in response to potentially infectious stimuli is based on two propositions. First, power has psychological effects that may change how contamination risks are perceived. Power triggers the activation of the behavioral approach rather than inhibition system (Keltner et al., 2003; Cho & Keltner, 2020), which makes the powerful view their chances of dealing with potential contamination risks more positively. For instance, power boosts: (a) perceived control over the potential of being infected (Fast, Gruenfeld, Sivanathan, & Galinsky, 2009), (b) optimism about “beating the odds” of potential contamination (e.g., the powerful are more likely to engage in unprotected sex; Anderson & Galinsky, 2006; Jordan, Galinsky, & Sivanathan, 2012, see also Fast, Sivanathan, Mayer, & Galinsky, 2012; Brion & Anderson, 2013), and (c) a sense of safety and distance from situations that pose potential contamination risks (e.g., such as the direct aftermath of the 9/11 disaster in NYC; Magee & Smith, 2013; Magee, Millikin, & Lurie, 2010; Smith & Trope, 2006). Power, in other words, reduces the perceived need to create distance to a contaminant through disgust.

Second, the powerful are better at mobilizing and transporting their bodily resources because power elicits a more efficient cardiovascular profile (Akinola & Mendes, 2013; Sapolsky, 2005; Scheepers, De Wit, Ellemers, & Sassenberg, 2012; Schmid & Schmid Mast, 2013). This, in turn, may help the immune system overcome infectious challenges (Ader, 2001; Dienstbier, 1989; Sapolsky, 2005). Since people feel less disgusted by infectious cues when their immune system is relatively strong (Fessler et al., 2005; Schaller & Park, 2011), this suggests that having power can reduce how disgusted people feel. Indeed, merely making people feel powerful in laboratory settings can already elicit adaptive patterns of cardiovascular reactivity (i.e., bodily challenge instead of threat; Blascovich & Mendes, 2010; Scheepers et al., 2012); which has been linked to the immune system's ability to fight infection (Sapolsky, Alberts, & Altmann, 1997; Segerstrom & Miller, 2004; Sgoutas-Emch et al., 1994). Thus, power reduces the perceived, and possibly the actual, need to create distance to a contaminant through disgust.

Disgust motivates avoidant behavior in the face of contamination risks and inhibits an individual's interaction with the environment (Oaten, Stevenson, & Case, 2009; Rozin, Haidt, & McCauley, 2008). Disgust activates parasympathetic nervous responses, including reduced heart rate, lowered blood pressure, and slower respiration, all of which serve to inhibit action (Ekman et al., 1983). Because disgust has evolved to guard against bodily contamination (e.g., bacteria from feces, rotten food, diseases, poor hygiene), it is still associated with a distinct gut-level feeling. This response, however, is also triggered when

people are confronted with others' behaviors that seems to contaminate or “debase” their body or soul (e.g., non-normative sexual acts; Chapman et al., 2009; Horberg et al., 2009). Our line of reasoning thus suggests that power makes people experience less disgust in response to biological contaminants (e.g., feces) and “impure” behaviors that are not direct contamination risks but that are merely associated with uncleanliness (e.g., observing sexual acts between men; Mooijman & Stern, 2016).

We propose that the suppressant effect of power is most likely to materialize for disgust rather than other negative emotions because people primarily experience disgust when they evaluate a stimulus as a contaminant (Oaten et al., 2009). People are less likely to experience emotions such as anger, outrage, contempt, anxiety, fear, and/or sadness when faced with a contamination threat (Heerdink, Koning, Van Doorn, & Van Kleef, 2018; Wagemans, Brandt, & Zeelenberg, 2018) and these emotions tend to not motivate the avoidance of contamination to the same degree as disgust (Carver & Harmon-Jones, 2009; Darley, 2009; Forgas, 2017; Schriber, Chung, Sorensen, & Robbins, 2017; Strack, Lopes, Esteves, & Fernandez-Berrocal, 2017). Although disgust and fear can have a similar motivational function in avoiding contamination, they tend to be distinguishable: disgust is more tightly linked to the threat of contamination than fear (Inbar & Pizarro, 2016; Woody & Teachman, 2000) such that people tend to be disgusted by potentially infectious stimuli (e.g., rotten food) or acts associated with impurity (e.g., someone eating their booger) rather than be fearful of it. We therefore expect that in response to potential infectious stimuli, power primarily decreases disgust.

### 3. Power, disgust, and the moral condemnation of impurity

So far, we have argued that power reduces disgust. But how does this impact moral judgment? Research suggests that disgust sensitivity is uniquely associated with the moral condemnation of impure behaviors (e.g., people who display poor bodily hygiene; Wagemans et al., 2018) and that making people feel less disgusted makes them condemn those who violate standards of purity less harshly (Mooijman & Van Dijk, 2015). Experiencing disgust predicts negative moral judgment in part because people attempt to distance themselves from others' impurity (Curtis & Biran, 2001; Gutierrez & Giner-Sorolla, 2007; Hutcherson & Gross, 2011; Tybur, Lieberman, & Griskevicius, 2009). This suggests that power impacts the moral condemnation of impure behaviors through affecting the experience of disgust. Power makes people feel less disgusted, which in turn decreases their moral condemnation of impure behaviors. Specifically, because judgments of impure behaviors are primarily associated with disgust rather than other negative emotions (Heerdink et al., 2018; Horberg et al., 2009; Landmann & Hess, 2018; Tracy, Steckler, & Heltzel, 2019; Wagemans et al., 2018), we predict that power decreases the moral condemnation of impure behaviors by reducing how disgusted people feel, rather than by impacting other negative emotions such as anger, outrage, contempt, sadness, anxiety, or fear.

Our prediction that power reduces the moral condemnation of impure behaviors by lowering levels of disgust suggests that experiencing power can reduce inhibition tendencies, at least in the domain of purity. Finding evidence for this prediction would provide a theoretical advancement, since approach/inhibition theory predicts that power increases only approach tendencies instead of decreasing inhibition tendencies (Keltner et al., 2003). In addition, our theorizing suggests that power affects moral judgment by lowering levels of disgust instead of by impacting reliance on disgust. However, research has shown that power can increase individuals' reliance on their bodily states (e.g., power makes people more likely to act on implicit prejudice or feelings of hunger; Guinote, Weick, & Cai, 2012; Guinote, 2010; Weick & Guinote, 2008). Contrasting these two theoretical possibilities, we explore—in pre-registered Studies 4, 5, and 7—the possibility that power also increases reliance on disgust.

#### 4. Overview of current research

We ran seven studies. To test our first prediction—that power suppresses disgust—we conducted three studies. Using a large sample from YourMorals.org in Study 1, we tested whether trait-level sense of power was negatively associated with trait-level disgust, while controlling for age, gender, and social class. Using a sample of US college students, we tested in Study 2 whether experimentally inducing power (versus a neutral control condition) decreased disgust. We also specified the exact nature of the relationship between power and disgust by investigating whether power reduced how disgusted participants felt and/or whether power reduced participants' evaluation of stimuli as disgusting. In Study 3 we tested whether the suppressant effect of power on disgust was the consequence of high power reducing disgust compared to a control condition or low power increasing disgust compared to a control condition (cf. Schaerer, du Plessis, Yap, & Thau, 2018).

In Studies 4–7, we examined the impact of power on moral condemnation. Using a sample of US college students in Study 4, we tested whether power reduced the moral condemnation of behaviors that violate standards of purity in the workplace through decreasing disgust. In Study 5 we measured disgust and other negative emotions two times: first, after confronting participants with impure behaviors and, second, after making them feel powerful. This allowed us to demonstrate that power uniquely lowered disgust and that this lowered disgust in turn reduced moral judgment. In Study 6 we manipulated disgust. We predicted that high-power and low-power participants would morally condemn purity transgressions to the same degree when they were made to feel equally as disgusted. In Study 7, our final study, we manipulated whether participants appraised impure behaviors as posing a risk to them. We expected risk appraisals to attenuate the relationship between power, disgust, and moral judgment.

For all studies, participants provided informed consent and were debriefed, compensated, and thanked for their participation. Unless reported otherwise, all scales were seven-point scales that ranged from 1 (strongly disagree) to 7 (strongly agree). In each study we indicate any data exclusions, all manipulations, and all measures. Studies 3, 4, 5, 6, and 7 were preregistered. Additional data from three studies that were run years ago with sample sizes that are now deemed small are included in the Supplementary Materials (Nelson, Simmons, & Simohnson, 2018). In addition, we included one study in the Supplementary Materials that uses exactly the same design as Study 6. However, the pre-registration for this earlier study contained an error, even though the results confirmed our predictions. As such, we re-ran the study with a correct pre-registration. The older study with the pre-registration that contains a mistake is part of the Supplementary Materials. We briefly discuss the studies reported in the Supplementary Materials in the General Discussion. As such, we report all the studies that we ran on the impact of power on disgust and moral judgment.

#### 5. Study 1

In Study 1 we used a large sample of participants. We measured both the degree to which participants experienced power in their everyday lives and their trait-level sensitivity to disgust. We also controlled for demographic variables such as age, gender, and subjective social class in our analyses.

##### 5.1. Method

###### 5.1.1. Participants and procedure

A total of 2,020 participants (1297 males;  $M_{\text{age}} = 48.35$  years,  $SD_{\text{age}} = 16.57$ ) completed a survey including the personal-sense-of-power scale and disgust-sensitivity scale on YourMorals.org, a website where volunteers can complete personality measures typically related to moral constructs (see Graham et al., 2011; Mooijman et al., 2018).

Two participants failed to fill out any items of the disgust scale, which led to a total of 2018 participants that had completed all or some of the items from both the personal-sense-of-power and the disgust-sensitivity measure. Following the protocol developed by Olatunji et al. (2007; see <http://people.stern.nyu.edu/jhaidt/disgustscale.html>), we excluded 139 participants who did not answer 3 or 4 on question 12 of disgust-sensitivity scale (“I would rather eat a piece of fruit than a piece of paper”) and/or who did not answer 0 or 1 on question 16 (“You see a person eating an apple with a knife and fork.”). Thus, we were left with 1879 participants for our regression analyses. Including participants who failed the scale based on the criteria set by Olatunji et al. (2007) did not change the direction, magnitude, or significance of the observed relationship between power and disgust.

**5.1.1.1. Personal sense of power.** Participants completed the personal-sense-of-power scale (Anderson et al., 2012; Mooijman et al., 2015; Mooijman, van Dijk, van Dijk, & Ellemers, 2019). The scale assesses the extent to which people experience power in their everyday lives. Sample items include, “In my relationships with others, I think I have a great deal of power” and “If I want to, I get to make the decisions” ( $M = 4.33$ ,  $SD = 0.74$ ; Cronbach's  $\alpha = 0.88$ ).

**5.1.1.2. Disgust-sensitivity scale.** Participants also completed the disgust-sensitivity scale (Haidt, McCauley, & Rozin, 1994; modified by Olatunji et al., 2007). Participants rated on a five-point scale (0 = *not at all*; 4 = *very much*) the degree to which 27 statements were true of them (e.g., “I never let any part of my body touch the toilet seat in public restrooms”). As noted above, two of these items (items 12 and 16) were used as filters. We averaged the remaining 25 items that comprise the disgust-sensitivity scale ( $M = 1.62$ ,  $SD = 0.59$ ;  $\alpha = 0.86$ ). In previous research, the disgust-sensitivity scale was a strong predictor of the ability to tolerate disgust-inducing experiences such as touching cockroaches or eating substances that resemble fecal matter. This scale is thus considered to be a reliable measure of how susceptible people are to experiencing disgust in their everyday lives (Rozin, 1999).

**5.1.1.3. Social class.** Social class was measured using the MacArthur scale of subjective SES (Piff, Stancato, Côté, Mendoza-Denton, & Keltner, 2012). Participants were shown a vertical ladder and asked to: “Think of this ladder, to the right, as representing where people stand in your country. At the top of the ladder are the people who are the best off—those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are the worst off—who have the least money, least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom. Where would you place yourself on this ladder? Please choose the radio button corresponding to the position on the ladder where you think you stand at this time in your life.” There were 10 radio buttons to choose from. Participants, on average, rated their social class as slightly above average ( $M = 5.81$ ,  $SD = 2.60$ ).

##### 5.2. Results

A regression analysis in which the disgust-sensitivity scale was regressed on the personal-sense-of-power scale showed that the personal-sense-of-power scale was negatively associated with disgust sensitivity ( $B = -0.11$ ,  $SE = 0.02$ ,  $t(1,877) = -5.71$ ,  $p < .001$ , 95% CI =  $[-0.14, -0.07]$ ,  $r_{\text{sp}} = -0.13$ ), even after controlling for age, gender, and subjective social class ( $B = -0.12$ ,  $SE = 0.02$ ,  $t(1,869) = -6.67$ ,  $p < .001$ , 95% CI =  $[-0.16, -0.09]$ ,  $r_{\text{sp}} = -0.15$ ). Social class correlated with power ( $r = 0.22$ ,  $p < .001$ ) but—in contrast to power—positively predicted disgust sensitivity after correcting for age, gender, and power ( $B = 0.02$ ,  $SE = 0.01$ ,  $t(1,869) = 3.05$ ,  $p = .002$ , 95% CI =  $[0.02, 0.06]$ ,  $r_{\text{sp}} = 0.07$ ).

### 5.3. Discussion

Using a large sample, Study 1 shows that experiencing power in everyday life was negatively associated with the tendency to experience disgust. It also shows that this power-disgust relationship could not be accounted for by age, gender, or subjective social class, and that status positively predicted disgust. This suggests that the relationship between power and disgust can be separated from other, more status-based measures (see [Blader & Chen, 2012](#) for more on opposing effects of power versus status). To examine whether power causes people to feel less disgusted, we next conducted an experimental study.

## 6. Study 2

Does power decrease the experience of disgust, the evaluation of stimuli as disgusting, or both? Disgust is a subjective gut-level experience, as people can feel disgusted. But disgust is also a characteristic that can be ascribed to a stimulus. For instance, people can identify cockroaches as disgusting bugs without necessarily experiencing a gut-level feeling of disgust. Our theorizing in the present manuscript centers on power decreasing the personal experience of disgust as a gut-level emotion (e.g., I feel disgusted, sick to my stomach, nauseous). This type of disgust provides the motivational impetus to avoid and distance oneself from potential infection ([Oaten et al., 2009](#)). In Study 2 we tested whether feeling powerful reduces the subjective experience of feeling disgusted, the evaluation of stimuli as disgusting, or both. We manipulated power using a frequently used autobiographical recall task ([Galinsky et al., 2003](#)) and we manipulated the focus of participants' disgust. Participants either indicated how disgusted they themselves felt in response to stimuli (i.e., self-focused disgust) or how disgusting they considered these stimuli (i.e., other-focused disgust).

### 6.1. Methods

#### 6.1.1. Participants and design

A total of 285 US college students at a major university in Southern California (198 females;  $M_{\text{age}} = 20.05$  years,  $SD_{\text{age}} = 1.16$ ) received partial course credit for their participation. Participants were randomly assigned to a 2 (power: high-power vs. control)  $\times$  2 (focus: self vs. other) between-participants design. We aimed to recruit as many participants as possible in a two-week timeframe. In Study 2, we included an attention check that instructed participants to ignore a Likert-scale and answer "yes" in a textbox below it instead. In addition, for the power manipulation, participants were instructed to recall a particular situation. We excluded participants who did not follow instructions—that is, those who wrote nothing, indicated they had never experienced such as situation, copied the experimental manipulation, or wrote 1–2 nonsense words. No participants in Study 2 failed the attention check or power manipulation.

#### 6.1.2. Procedure

**6.1.2.1. Power manipulation.** Depending on condition, participants recalled a powerful or neutral event in their lives ([Galinsky et al., 2003](#)). Participants in the high-power condition were asked to, "Please recall a particular incident out of your own life in which you had power over another individual or individuals. By power, we mean a situation in which you controlled the ability of another person or persons to get something they wanted, or were in a position to evaluate those individuals. Please describe this situation in which you had power—what happened, how you felt, etc." Participants in the control condition were asked to, "Please recall your last trip to the supermarket. Please describe your thoughts, your feelings, and the events that transpired during this trip etc."

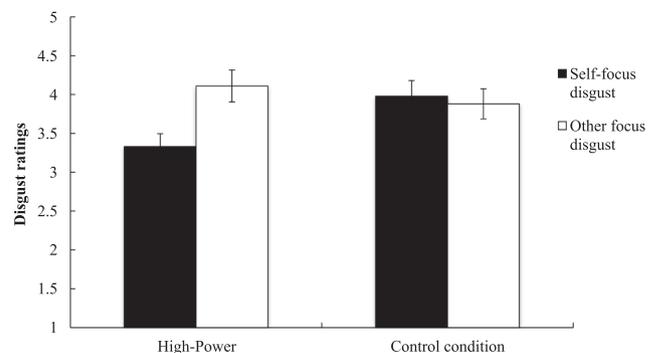
**6.1.2.2. Disgust.** Participants in the self-focus condition were confronted with five items that anchored on their experience of feeling disgusted. The items described visceral disgust responses to a

range of stimuli, most of which referred to relatively mundane everyday experiences (e.g., "If I was at a restaurant, and I accidentally touched a wad of chewing gum under the table with my bare hand, I would immediately lose my appetite", "If I walked into someone's house and smelled garbage, it would make me feel nauseous/want to leave immediately"; "It would make me feel sick to find out that someone only changed their underwear once a week",  $\alpha = 0.67$ ). In contrast, for participants in other-focus condition, the five items were modified so that the same content was presented in the form of statements about an external object or behavior (e.g., "It is disgusting to stick wads of chewing gum under tables, and on various other surfaces in public places", "People who don't take their garbage out until they can smell it are disgusting"; "People who only change their underwear once a week are gross",  $\alpha = 0.92$ ). We expected power to reduce disgust to a greater degree when participants were instructed to answer questions about how disgusted they felt compared to when participants were instructed to focus on evaluating others (e.g., that type of behavior/that person is disgusting).

**6.1.2.3. Manipulation check.** One coder, blind to conditions and hypotheses, rated each story participants wrote on a 7-point scale, measuring how much power the participant reported having. Confirming the validity of the power manipulation, participants described themselves as more powerful in the power condition ( $M = 5.57$ ,  $SD = 0.99$ ) compared to control ( $M = 2.69$ ,  $SD = 1.09$ ),  $t(283) = 23.24$ ,  $p < .001$ ,  $d = 2.76$ .

### 6.2. Results

We conducted a two-way ANOVA using power and focus as independent variables and disgust as a dependent variable. We observed no main effect of power ( $F[1, 281] = 1.72$ ,  $p = .19$ ,  $\eta_p^2 = 0.01$ ), a main effect of focus ( $F[1, 281] = 4.61$ ,  $p = .033$ ,  $\eta_p^2 = 0.02$ ), and a significant interaction effect between power and focus,  $F(1, 281) = 7.87$ ,  $p = .005$ ,  $\eta_p^2 = 0.03$ . Overall, participants reported slightly more disgust when evaluating others' behavior ( $M = 3.99$ ,  $SD = 1.63$ ) compared to reporting how disgusting they themselves felt ( $M = 3.67$ ,  $SD = 1.03$ ). Importantly, and consistent with our predictions, participants in the power condition experienced less disgust ( $M = 3.33$ ,  $SD = 0.87$ ) than participants in the control condition ( $M = 3.98$ ,  $SD = 1.07$ ) when they answered questions about how disgusted they themselves felt,  $t(149) = 4.06$ ,  $p < .001$ ,  $d = 0.67$ . No differences between the power ( $M = 4.11$ ,  $SD = 1.68$ ) and control condition ( $M = 3.88$ ,  $SD = 1.59$ ) were observed when participants answered questions about how disgusting they considered the behavior of others,  $t(132) = 0.84$ ,  $p = .41$ ,  $d = 0.15$ ; see [Fig. 1](#). In fact, powerful participants in the self-focus condition reported less disgust compared to all three other conditions ( $t_s > 2.54$ ,  $p_s < 0.012$ ,  $d_s > 0.44$ ).



**Fig. 1.** Disgust as a function of power and disgust focus (self-focus: how disgusted participants felt versus other-focus: how disgusting participants considered stimuli). Study 2.

6.3. Discussion

Study 2 shows that there is a causal, negative, relationship between power and felt disgust. Power reduced the subjective experience of feeling disgusted but not the evaluation of behaviors as disgusting, consistent with the idea that power reduces the type of disgust that provides the motivational impetus to avoid and distance oneself from potential infection (Oaten et al., 2009).

7. Study 3

In Study 3 we included a high-power, similar-power, and low-power condition, and measured a range of negative emotions in addition to disgust. We used participants from the Mechanical Turk platform, thereby diversifying our participant samples beyond yourmorals.org participants and college students.

7.1. Methods

7.1.1. Participants and design.

A total of 303 participants were recruited from the Mechanical Turk platform (153 females;  $M_{age} = 34.36$  years,  $SD_{age} = 25.83$ ). Participants were randomly assigned to one of three conditions: high power, similar power, or low power. We aimed to recruit 300 participants (100 per condition) and preregistered the study at <http://aspredicted.org/blind.php?x=id2k5m>. We used the same attention check as in Study 2. Twenty-seven participants failed the attention check. Similar to Study 2 and in line with our pre-registration, we excluded responses from an additional seven participants who did not follow instructions with regard to the power manipulation—that is, those who wrote nothing, indicated they had never experienced such as situation, copied the experimental manipulation, or wrote 1–2 nonsense words. Thus, overall, we did not include in the analyses the 34 participants that failed the attention check and/or the power manipulation. Our final sample consisted of 269 participants ( $n_{high-power\ condition} = 93$ ,  $n_{similar-power\ condition} = 87$ ,  $n_{low-power\ condition} = 89$ ). The exclusion of participants did not differ per condition ( $\chi^2 = [2, n = 303] = 2.67$ ,  $p = .26$ ).

7.1.2. Procedure.

7.1.2.1. Power manipulation. Depending on condition, participants recalled an event in their professional lives where they had more power than, similar power as, or less power than others in their organization (cf. Schaefer et al., 2018). Participants in the high-power condition were asked to, “Please think of an event that occurred in an organization where you worked that was hierarchical. That is, please describe an event where you could either evaluate others in the organization, where others in the organization reported directly to you, or where you had disproportionate power or control (or both) over others. Participants in the similar-power condition were asked to, “Please think of an event that occurred in an organization where you worked that was not hierarchical. That is, please describe an event from your own life where you and others did not directly report to one another, nor did you have disproportionate power or control over each other. Participants in the low-power condition were asked to, “Please think of an event that occurred in an organization where you worked that was hierarchical. That is, please describe an event from your own life either where others in the organization could evaluate you, where you directly reported to others, or where others had disproportionate power or control (or both) over you.”

7.1.2.2. Disgust. We then presented participants with five impure behaviors. We asked participants to imagine that these behaviors took place in the organizational context that participants described during the power manipulation. Using adapted stimuli from Olatunji, Haidt, McKay, and David (2008), participants read: “Your share an office desk with others and when you get to work this morning your desk is riddled

with food left-overs, an unwashed food plate, and coffee stains”; “You clean the company fridge and accidentally open several food containers from others that are moldy, smelly, and rotten”; “You accidentally touch a wad of chewing gum under your office desk with your bare hand”; “You find out that an employee in the organization where you work only changes his underwear once a week”; and “A colleague picks his nose and subsequently eats his booger in your presence.” We randomized the order in which these impure behaviors were presented to participants.

For each transgression separately, participants indicated whether they felt: disgusted, sick to their stomach, nauseous, angry, outraged, contemptuous, fearful, sad, and anxious. We randomized the order in which participants were presented with these emotions. We used two analytical strategies. First, in line with our pre-registration, we created three composite scales: disgust (I feel: disgusted, sick to my stomach, nauseous;  $\alpha = 0.93$ ), anger (I feel/experience angry, outraged, contempt;  $\alpha = 0.91$ ), and fear (I feel fearful, sad, anxious;  $\alpha = 0.94$ ). The composite scale of disgust was significantly correlated with the composite scale of anger ( $r = 0.62$ ,  $p < .001$ ) and the composite scale of fear ( $r = 0.32$ ,  $p < .001$ ). The composite scales of anger and fear were also significantly correlated ( $r = 0.44$ ,  $p < .001$ ). Besides creating these three composite scales, we also worked with single emotion items and created separate individual scales for the non-disgust emotions with anger ( $\alpha = 0.72$ ), outrage ( $\alpha = 0.82$ ), contempt ( $\alpha = 0.84$ ), fear ( $\alpha = 0.90$ ), sadness ( $\alpha = 0.82$ ), and anxiety ( $\alpha = 0.89$ ), each separately averaged across the five purity transgressions. The reported  $\alpha$ 's here thus represent the alpha's for each individual emotion across the five purity transgressions (i.e., anger measured 5 times, once for each transgression; outrage measured 5 times, once for each transgression; etc.).

7.1.2.3. Manipulation check. Participants indicated how powerful they felt (i.e., I feel powerful, influential, and in control of others;  $\alpha = 0.96$ ). An ANOVA with condition as independent variable and sense of power as dependent variable yielded a significant effect of condition,  $F(2, 246) = 189.77$ ,  $p < .001$ ,  $\eta_p^2 = 0.59$ . Participants in the high-power condition ( $M = 5.64$ ,  $SD = 1.19$ ) felt more powerful than participants in the similar-power condition ( $M = 4.56$ ,  $SD = 1.41$ ;  $t[1\ 7\ 8] = 5.59$ ,  $p < .001$ ,  $d = 0.84$ ) and low-power condition ( $M = 1.92$ ,  $SD = 1.36$ ),  $t(1\ 8\ 0) = 19.71$ ,  $p < .001$ ,  $d = 2.94$ . Participants in the low-power condition felt less powerful than participants in the similar-power condition,  $t(1\ 7\ 4) = 12.62$ ,  $p < .001$ ,  $d = 1.91$ . Thus, our power manipulation successfully manipulated participants' sense of power.

7.2. Results

Correlations among the study variables are presented in Table 1. First, we focused on the three composite scales of disgust, anger and fear. Overall, participants scored higher on the composite scale of disgust ( $M = 5.09$ ,  $SD = 1.24$ ) than the composite scale of anger ( $M = 4.63$ ,  $SD = 1.19$ ;  $t(2\ 6\ 8) = 7.12$ ,  $p < .001$ ,  $d = 0.43$ ) and fear ( $M = 2.95$ ,  $SD = 1.40$ ;  $t[2\ 6\ 8] = 22.70$ ,  $p < .001$ ,  $d = 1.39$ ). This

Table 1  
Correlation Table for Study 3.

	Disgust	Anger	Outrage	Contempt	Fear	Anxiety	Sadness
Disgust	–						
Anger	0.60***	–					
Outrage	0.66***	0.83***	–				
Contempt	0.43***	0.64***	0.71***	–			
Fear	0.27***	0.37***	0.44***	0.36***	–		
Anxiety	0.33***	0.38***	0.41***	0.33***	0.67***	–	
Sadness	0.26***	0.32***	0.32***	0.27***	0.74***	0.70***	–

Disgust is the average of items: disgusted, sick to my stomach, nauseous.  
\*\*\*  $p < .001$ .

demonstrates that the purity transgressions worked as intended. Following our pre-registration, we conducted three separate ANOVA's with condition as independent variable and the composite scales of disgust, anger, and fear as separate dependent variables. These analyses yielded a marginal main effect of condition on the composite scale of disgust ( $F[2, 266] = 2.77, p = .064, \eta_p^2 = 0.02$ ), a significant main effect on anger ( $F[2, 266] = 6.72, p = .001, \eta_p^2 = 0.05$ ), but no significant effect on fear,  $F(2, 266) = 2.03, p = .13, \eta_p^2 = 0.02^1$ .

Consistent with our predictions, participants in the high-power condition scored lower on the composite scale of disgust ( $M = 4.85, SD = 1.25$ ) than participants in the similar-power condition ( $M = 5.23, SD = 1.25; t(178) = 2.02, p = .044, d = 0.30$ ) and low-power condition ( $M = 5.22, SD = 1.20$ ),  $t(180) = 2.02, p = .045, d = 0.30$ . No differences on the composite scale of disgust were observed between participants in the similar-power condition and participants in the low-power condition,  $t(174) = 0.06, p = .96, d = 0.01$ . In addition, no significant differences emerged when we compared participants' scores on the composite scale of anger in the high-power condition ( $M = 4.35, SD = 1.26$ ) to participants' scores on the composite scale of anger in the similar-power condition ( $M = 4.58, SD = 1.22$ ),  $t(178) = 1.27, p = .21, d = 0.19$ . Participants in the low-power condition ( $M = 4.98, SD = 1.00$ ), however, scored higher on the composite scale of anger compared to participants in the similar-power condition ( $t(174) = 2.35, p = .020, d = 0.36$ ) and high-power condition,  $t(180) = 3.71, p < .001, d = 0.55$ . Similar to the composite scale of anger, no differences were observed when we compared participants' scores on the composite scale of fear in the high-power condition ( $M = 2.76, SD = 1.35$ ) to participants in the similar-power condition ( $M = 2.93, SD = 1.45$ ),  $t(178) = 0.82, p = .42, d = 0.12$ . Participants in the low-power condition ( $M = 3.17, SD = 1.40$ ) scored higher on the composite scale of fear than participants in the high-power condition ( $t(180) = 2.04, p = .042, d = 0.30$ ) but not the similar-power condition,  $t(174) = 1.14, p = .26, d = 0.17$ .

Now, turning to single emotion items (Table 2), although we observed main effects of condition on the single emotion items of anger, outrage, contempt, anxiety, and fear ( $F[2, 266] = 5.19, p = .006, \eta_p^2 = 0.04; F[2, 268] = 6.44, p = .002, \eta_p^2 = 0.05; F[2, 266] = 4.81, p = .009, \eta_p^2 = 0.04; F[2, 266] = 2.78, p = .064, \eta_p^2 = 0.02; F[2, 266] = 2.86, p = .060, \eta_p^2 = 0.02$ , respectively), none of these emotions differed significantly between participants in the high-power condition and participants in the similar-power condition (see Table 2). Low power increased anger, contempt, and anxiety compared to similar power. No significant effect of condition was found for sadness,  $F(2, 266) = 0.48, p = .62, \eta_p^2 = 0.00$ .

### 7.3. Discussion

Consistent with our predictions, Study 3 demonstrates that high power reduced disgust (but not other negative emotions), but low power increased some negative emotions besides disgust. Taken

**Table 2**

Table for means, standard deviations, t-values, p-values, and Cohen's d effect sizes for relevant contrasts for Study 3.

	High-power	Similar-power	Low-power	High vs. similar		High vs. low		Similar vs. low	
	Mean (SD)	Mean (SD)	Mean (SD)	t-value	p-value (d)	t-value	p-value (d)	t-value	p-value (d)
Disgust	4.84 (1.25)	5.23 (1.25)	5.22 (1.19)	2.02	0.044 (0.30)	2.02	0.045 (0.30)	0.06	0.96 (0.01)
Anger	4.74 (1.21)	4.89 (1.15)	5.26 (0.98)	0.85	0.39 (0.13)	3.19	0.002 (0.48)	2.30	0.023 (0.35)
Outrage	4.17 (1.41)	4.48 (1.39)	4.80 (1.31)	1.48	0.14 (0.22)	3.12	0.002 (0.47)	1.56	0.12 (0.24)
Contempt	4.12 (1.49)	4.37 (1.52)	4.87 (1.21)	1.09	0.28 (0.16)	3.67	< 0.001 (0.55)	2.39	0.018 (0.36)
Fear	2.20 (1.50)	2.54 (1.53)	2.74 (1.58)	1.49	0.14 (0.22)	2.35	0.020 (0.35)	0.86	0.39 (0.13)
Anxiety	3.19 (1.64)	3.19 (1.74)	3.69 (1.61)	0.02	0.99 (0.00)	2.11	0.036 (0.31)	2.01	0.046 (0.30)
Sadness	2.89 (1.41)	3.06 (1.59)	3.09 (1.48)	0.77	0.44 (0.12)	0.93	0.35 (0.14)	0.12	0.90 (0.02)

Disgust is the average of items: disgusted, sick to my stomach, nauseous. (d) refers to Cohen's d effect size.

together, Studies 1–3 provide converging and consistent evidence for our theorizing across different samples and methodologies, suggesting that elevated power reduces disgust. In Studies 4, 5, and 6, we tested how this reduced disgust affects moral judgments.

## 8. Study 4

In Study 4, we investigated whether power decreases the moral condemnation of behaviors that violate standards of purity. We also tested whether power reduces moral condemnation through lowering disgust and/or whether power interacted with disgust to predict moral judgment (i.e., affecting reliance on disgust; Guinote, 2007).

### 8.1. Methods

#### 8.1.1. Participants and design.

A total of 207 US college students at a major university in Chicago (104 females;  $M_{age} = 20.21$  years,  $SD_{age} = 3.57$ ) received pay for their participation. Participants were randomly assigned to three conditions: high power, similar power, or low power. We aimed to recruit 200 participants and pre-registered our study at <http://aspredicted.org/blind.php?x=x7vn4y>. We told participants that “people vary in the amount they pay attention to these kinds of surveys. Some take them seriously and read each question, whereas others go very quickly and barely read the questions at all. If you have read this question carefully, please select *somewhat disagree* below”. Two participants did not select *somewhat disagree* and were not included in the analyses reported in the results section (per our preregistered analysis plan). Our final sample consisted of 205 participants ( $n_{high-power\ condition} = 69, n_{similar-power\ condition} = 68, n_{low-power\ condition} = 68$ ). The exclusion of participants did not differ per condition ( $\chi^2 = [2, n = 207] = 0.99, p = .61$ ).

#### 8.1.2. Procedure

**8.1.2.1. Power manipulation.** All participants were instructed to imagine themselves as an employee in a medium-sized firm (cf. Blader & Chen, 2012). In the high-power [low-power] condition, participants were then instructed to imagine “*having hierarchical relationships with others in your organization. This means that you hold more [less] power than other employees and you control many more [fewer] resources compared to other employees in the organization. Other employees directly report to you [you directly report to other employees].*” In the similar-power condition, participants were instructed to imagine “*having non-hierarchical relationships with others in your organization. This means that you hold the same amount of power as other employees and you control an equal amount of resources compared to other employees in the organization. Neither you nor the other employees directly report to each other.*”

**8.1.2.2. Disgust.** We then presented participants with the same impure behaviors as in Study 3. For each transgression separately, participants

were asked to indicate the likelihood that they experienced disgust (I feel disgusted, sick to my stomach, nauseous;  $\alpha = 0.92$ ).

**8.1.2.3. Moral condemnation.** For each transgression separately, participants indicated how immoral they considered the transgression (I find this behavior morally wrong, morally unacceptable, immoral). We randomized the order in which participants answered the moral condemnation questions and averaged all items into one moral-condemnation scale ( $\alpha = 0.92$ ).

**8.1.2.4. Manipulation check.** Participants indicated how powerful they felt (i.e., as an employee: I have a lot of power, control over resources, influence over others;  $\alpha = 0.95$ ). An ANOVA with condition as independent variable and sense of power as dependent variable yielded a significant effect of condition,  $F(2, 202) = 54.03$ ,  $p < .001$ ,  $\eta_p^2 = 0.35$ . Participants in the high-power condition ( $M = 4.88$ ,  $SD = 1.49$ ) felt more powerful than participants in the similar-power condition ( $M = 3.51$ ,  $SD = 1.33$ ;  $t[1\ 3\ 5] = 5.65$ ,  $p < .001$ ,  $d = 0.97$ ) and low-power condition ( $M = 2.47$ ,  $SD = 1.26$ ),  $t(1\ 3\ 5) = 10.22$ ,  $p < .001$ ,  $d = 1.76$ . Participants in the low-power condition felt less powerful than participants in the similar-power condition,  $t(1\ 3\ 4) = 4.75$ ,  $p < .001$ ,  $d = 0.82$ . Thus, our power manipulation successfully manipulated participants' sense of power.

## 8.2. Results

Two separate univariate ANOVA's with power as independent variable and disgust or moral condemnation as dependent variable yielded a marginally significant effect of power on disgust ( $F[2, 202] = 2.68$ ,  $p = .071$ ,  $\eta_p^2 = 0.03$ ) and a significant effect of power on moral condemnation,  $F(2, 202) = 3.34$ ,  $p = .037$ ,  $\eta_p^2 = 0.03$ . Replicating Study 3, participants in the high-power condition experienced less disgust ( $M = 4.64$ ,  $SD = 1.07$ ) than participants in the similar-power condition ( $M = 5.00$ ,  $SD = 0.97$ ;  $t[1\ 3\ 5] = 2.07$ ,  $p = .040$ ,  $d = 0.32$ ) and low-power condition ( $M = 4.99$ ,  $SD = 1.09$ ),  $t(1\ 3\ 5) = 1.92$ ,  $p = .058$ ,  $d = 0.39$ . Disgust did not differ significantly between participants in the low-power condition and similar-power condition,  $t(1\ 3\ 4) = 0.05$ ,  $p = .96$ ,  $d = 0.01$ . Participants in the high-power condition morally condemned the impure behaviors less ( $M = 4.35$ ,  $SD = 1.08$ ) than participants in low-power condition ( $M = 4.80$ ,  $SD = 0.96$ ;  $t[1\ 3\ 5] = 2.57$ ,  $p = .011$ ,  $d = 0.41$ ). Although participants in the high-power condition morally condemned the impure behaviors less than participants in similar-power condition, this difference did not reach conventional levels of statistical significance ( $M = 4.63$ ,  $SD = 1.03$ ),  $t(1\ 3\ 5) = 1.53$ ,  $p = .13$ ,  $d = 0.23$ . Moral condemnation did not differ significantly between participants in the low-power condition and similar-power condition,  $t[1\ 3\ 4] = 1.00$ ,  $p = .32$ ,  $d = 0.20$ .

We then tested whether disgust mediated the impact of power on moral condemnation. Disgust correlated significantly with moral condemnation ( $r = 0.54$ ,  $p < .001$ ) and a mediation analysis using bootstrapping techniques (10,000 resamples; Hayes, Preacher, & Myers, 2011) shows that the reduction in disgust mediated the impact of power on moral condemnation for the high-power versus similar power contrast ( $b = -0.09$ ,  $SE = 0.05$ , 95% CI =  $[-0.19, -0.005]$ ) but not the high-power vs. low-power contrast:  $b = -0.09$ ,  $SE = 0.05$ , 95% CI =  $[-0.19, 0.005]$ ). To test whether power impacted moral judgment through reliance on disgust, we conducted two regression analyses. These regression analyses had power (high vs. low or high vs. similar), disgust (standardized), and their interaction entered as independent variables, and moral condemnation as dependent variable. We found no interaction effect between power and disgust for the high vs. low contrast ( $B = -0.01$ ,  $SE = 0.07$ ,  $t[1\ 3\ 3] = -0.17$ ,  $p = .86$ , 95% CI =  $[-0.16-0.13]$ ,  $r_{sp} = -0.02$ ) nor for the high vs. similar contrast ( $B = -0.00$ ,  $SE = 0.08$ ,  $t[1\ 3\ 3] = -0.03$ ,  $p = .98$ , 95% CI =  $[-0.16-0.16]$ ,  $r_{sp} = -0.01$ ).

## 8.3. Discussion

Study 4 provides some evidence for the hypothesis that power reduces disgust and that this, in turn, reduces the degree to which people morally condemned impure behaviors. We observed no evidence for the notion that power interacted with disgust to predict moral judgment (i.e., power did not affect reliance on disgust when constructing a moral judgment; Guinote, 2007). Thus, although the findings of Study 4 were mixed due to some marginal effects and only one mediation-contrast reaching significance, they were overall consistent with our predictions that power reduces the moral condemnation of impurity by reducing disgust. In Study 5, we aimed to provide more direct evidence for the notion that power reduces the degree to which people morally condemn impure behaviors through disgust rather than other negative emotions.

## 9. Study 5

The aims of Study 5 were twofold. First, we aimed to show that power decreases moral condemnation by reducing disgust instead of affecting other negative emotions. Second, we measured disgust and other emotions before participants were given power (timepoint 1) and after they were given power (timepoint 2). Based on the findings from Study 3, we predicted that power would decrease disgust, but not necessarily other emotions, when comparing the two timepoints. We predicted that this decrease in disgust would explain why power decreases moral condemnation. This design allowed us to more directly test our prediction that power affects moral condemnation through decreasing disgust instead of affecting reliance on disgust. By using the difference between pre- and post-power disgust as mediator, we control for the initial amount of disgust that participants experienced when confronted with impure behaviors.

### 9.1. Method

#### 9.1.1. Participants and design

A total of 308 participants were recruited from the Mechanical Turk platform (159 females;  $M_{age} = 33.88$  years,  $SD_{age} = 10.33$ ). Participants were randomly assigned to one of two conditions: high power or similar power. We aimed to recruit 300 participants (150 per condition) and preregistered the study at <http://aspredicted.org/blind.php?x=d2nh4x>. We used the same attention check as in Studies 2 and 3. Twenty-two participants failed the attention check and were not included in the analyses reported in the results section (consistent with our preregistered analysis plan). Our final sample consisted of 286 participants ( $n_{high-power\ condition} = 143$ ,  $n_{similar-power\ condition} = 143$ ). The exclusion of participants did not differ per condition ( $\chi^2 = [2, n = 308] = 0.00$ ,  $p = 1.00$ ).

### 9.2. Procedure

#### 9.2.1. Disgust at time 1

We presented participants with the same impure behaviors as in Studies 3 and 4. For each transgression separately, participants indicated whether they felt: disgusted, sick to their stomach, nauseous, angry, outraged, full of contempt, fearful, sad, and anxious. We randomized the order in which participants were presented with these emotions. Consistent with Study 3, we created three composite scales: disgust (I feel: disgusted, sick to my stomach, nauseous;  $\alpha = 0.91$ ), anger (I feel/experience angry, outraged, contempt;  $\alpha = 0.90$ ), and fear (I feel fearful, sad, anxious;  $\alpha = 0.94$ ). In addition to creating these three composite scales, we also created scales with only anger (I feel angry;  $\alpha = 0.68$ ), outrage (I feel outraged;  $\alpha = 0.76$ ), contempt (I experience contempt;  $\alpha = 0.81$ ), fear (I feel fearful;  $\alpha = 0.92$ ), sadness (I feel sad;  $\alpha = 0.85$ ), or anxiety (I feel anxious;  $\alpha = 0.89$ ). The reported  $\alpha$ 's represent the alpha's across the five purity transgressions. We randomized the order in which the impure behaviors were presented to

**Table 3**  
Table for means, standard deviations, t-values, p-values, and Cohen’s d effect sizes single emotions for Study 5.

Time 1	High power Mean (SD)	Similar power Mean (SD)	t-value	p-value (d)	Time 2	High power Mean (SD)	Similar power Mean (SD)	t-value	p-value (d)
Disgust	5.03 (1.14)	4.99 (1.12)	0.23	0.82 (0.03)	Disgust	4.80 (1.12)	5.13 (1.19)	-2.38	0.018 (0.28)
Anger	4.86 (1.06)	4.83 (1.12)	0.15	0.88 (0.02)	Anger	5.13 (1.19)	4.92 (1.21)	1.47	0.14 (0.17)
Outrage	4.37 (1.22)	4.38 (1.38)	-0.12	0.91 (0.01)	Outrage	3.86 (1.21)	3.75 (1.25)	0.72	0.47 (0.09)
Contempt	4.43 (1.29)	4.31 (1.45)	0.72	0.47 (0.09)	Contempt	4.38 (1.52)	4.28 (1.62)	0.59	0.56 (0.07)
Fear	2.31 (1.45)	2.49 (1.61)	-1.00	0.32 (0.12)	Fear	2.20 (1.50)	2.33 (1.69)	-0.68	0.50 (0.08)
Anxiety	3.12 (1.55)	3.07 (1.64)	0.57	0.46 (0.07)	Anxiety	3.02 (1.79)	2.86 (1.81)	0.74	0.46 (0.09)
Sadness	2.75 (1.35)	2.88 (1.58)	-0.74	0.57 (0.09)	Sadness	2.57 (1.54)	2.66 (1.73)	-0.51	0.61 (0.06)

Disgust is the average of items: disgusted, sick to my stomach, nauseous.  
(d) refers to Cohen’s d effect size.

participants and we randomized the order in which participants answered questions. At timepoint 1, the composite scale of disgust was significantly correlated with the composite scale of anger ( $r = 0.56, p < .001$ ) and the composite scale of fear ( $r = 0.35, p < .001$ ). The composite scales of anger and fear were also significantly correlated ( $r = 0.42, p < .001$ ). See Table 3 for the correlations between the single emotion items at timepoint 1.

9.2.2. Power manipulation

After the measurement of emotions at time 1, participants were instructed to imagine themselves as an employee in a medium-sized firm (cf. Blader & Chen, 2012). We used the same power manipulation as in Study 4.

9.2.3. Disgust at time 2

We then presented participants with the same impure behaviors as at time 1. Again, for each transgression separately, participants indicated whether they felt: disgusted, sick to their stomach, nauseous, angry, outraged, full of contempt, fearful, sad, and anxious. We randomized the order in which participants were presented with these emotions and created three composite scales: disgust (I feel: disgusted, sick to my stomach, nauseous;  $\alpha = 0.91$ ), anger (I feel/experience angry, outraged, contempt;  $\alpha = 0.93$ ), and fear (I feel fearful, sad, anxious;  $\alpha = 0.96$ ). Please note that the anxiety-item was accidentally not measured for the first transgression at time 2, thus creating a fear-composite scale of 14 instead of 15 items. In addition to creating these three composite scales, we also created scales with only anger (I feel angry;  $\alpha = 0.76$ ), outrage (I feel outraged;  $\alpha = 0.85$ ), contempt (I experience contempt;  $\alpha = 0.82$ ), fear (I feel fearful;  $\alpha = 0.95$ ), sadness (I feel sad;  $\alpha = 0.92$ ), or anxiety (I feel anxious;  $\alpha = 0.93$ ). The reported  $\alpha$ ’s represent the alpha’s across the five purity transgressions. We randomized the order in which the impure behaviors were presented to participants and we randomized the order in which participants answered questions. At timepoint 2, the composite scale of disgust was significantly correlated with the composite scale of anger ( $r = 0.50, p < .001$ ) and the composite scale of fear ( $r = 0.27, p < .001$ ). The composite scales of anger and fear were also significantly correlated ( $r = 0.44, p < .001$ ). See Tables 4 and 5 for the correlations between

**Table 4**  
Correlation Table single emotion items at timepoint 1 for Study 5.

	Disgust	Anger	Outrage	Contempt	Fear	Anxiety	Sadness
Disgust	-						
Anger	0.59***	-					
Outrage	0.55***	0.82***	-				
Contempt	0.41***	0.69***	0.76***	-			
Fear	0.32***	0.28***	0.42***	0.39***	-		
Anxiety	0.39***	0.30***	0.41***	0.44***	0.75***	-	
Sadness	0.26***	0.26***	0.32***	0.30***	0.81***	0.73***	-

Disgust is the average of items: disgusted, sick to my stomach, nauseous.  
\*\*\*  $p < .001$ .

**Table 5**  
Correlation Table single emotion items at timepoint 2 for Study 5.

	Disgust	Anger	Outrage	Contempt	Fear	Anxiety	Sadness
Disgust	-						
Anger	0.53***	-					
Outrage	0.50***	0.77***	-				
Contempt	0.34***	0.64***	0.73***	-			
Fear	0.25***	0.28***	0.34***	0.39***	-		
Anxiety	0.29***	0.33***	0.41***	0.47***	0.75***	-	
Sadness	0.21***	0.26***	0.29***	0.35***	0.84***	0.71***	-

Disgust is the average of items: disgusted, sick to my stomach, nauseous.  
\*\*\*  $p < .001$ .

the single emotion items at timepoint 2.

9.2.4. Moral condemnation

Participants also indicated the degree to which they considered the impure behaviors immoral. For each transgression separately, participants indicated the degree to which the behaviors were morally wrong, morally unacceptable, and immoral. We randomized the order in which participants answered the moral condemnation questions and averaged all items into one moral-condemnation scale ( $\alpha = 0.88$ ).

9.2.5. Manipulation check

Participants indicated how powerful they felt (i.e., as an employee I have a lot of power, control over resources, influence over others;  $\alpha = 0.95$ ). Confirming the validity of the manipulation, participants in the high-power condition ( $M = 5.13, SD = 1.54$ ) felt more powerful than participants in the similar-power condition ( $M = 3.71, SD = 1.67$ ),  $t[284] = 7.47, p < .001, d = 1.10$ .

9.3. Results

First, we focused on the three composite scales of disgust, anger and fear. At both time 1 and time 2, participants scored higher on the composite scale of disgust ( $M_{time1} = 5.00, SD_{time1} = 1.12; M_{time2} = 4.96, SD_{time2} = 1.16$ ) than the composite scale of anger ( $M_{time1} = 4.53, SD_{time1} = 1.15; M_{time2} = 4.63, SD_{time2} = 1.29; t(285) = 7.55, p < .001, d = 0.45; t(285) = 4.60, p < .001, d = 0.27$ , respectively) and the composite scale of fear ( $M_{time1} = 2.76, SD_{time1} = 1.41; M_{time2} = 2.58, SD_{time2} = 1.53; t[285] = 26.04, p < .001, d = 1.54; t(285) = 24.28, p < .001, d = 1.43$ , respectively). This demonstrates that the purity transgressions at both time points worked as intended. Confirming that participants in the high-power and similar-power conditions experienced the same amount of negative emotions before we randomly assigned them to the high-power or similar-power condition, three t-tests with the three composite scales of disgust, anger, and fear at timepoint 1 as dependent variables and condition as independent variable yielded no significant effect of condition,  $ts(284) < 0.41, p > .69, d < 0.05$ . In contrast, at time 2, participants in the high-power condition scored lower on the

composite scale of disgust ( $M = 4.80$ ,  $SD = 1.13$ ) than participants in the similar-power condition ( $M = 5.13$ ,  $SD = 1.19$ ;  $t[2\ 8\ 4] = 2.38$ ,  $p = .018$ ,  $d = 0.28$ )<sup>1</sup>. No significant effect of condition on the composite scale of anger ( $t[2\ 8\ 4] = 0.96$ ,  $p = .34$ ,  $d = 0.11$ ) or the composite scale of fear ( $t[2\ 8\ 4] = 0.20$ ,  $p = .85$ ,  $d = 0.03$ ) were observed at time 2. This directly replicates the findings from Studies 3 and 4.

Consistent with our predictions, participants in the high-power condition ( $M = 4.66$ ,  $SD = 1.02$ ) morally condemned the purity transgressions less severely than participants in the similar-power condition ( $M = 4.92$ ,  $SD = 1.11$ ;  $t[2\ 8\ 4] = 2.09$ ,  $p = .037$ ,  $d = 0.25$ ). To test whether the reduction in experienced disgust from timepoint 1 to timepoint 2 as a result of experiencing power actually mediates the impact of power on moral condemnation, we calculated difference scores by subtracting the composite scales of disgust, anger, and fear at time point 2 from the composite scales of disgust, anger, and fear at time point 1. For participants in the high-power condition their disgust difference score was negative ( $M_{diff} = -0.22$ ,  $SD_{diff} = 0.91$ ) and significantly different from the positive disgust difference score for participants in the similar-power condition ( $M_{diff} = 0.14$ ,  $SD_{diff} = 0.55$ ;  $t[2\ 8\ 4] = 4.01$ ,  $p < .001$ ,  $d = 0.48$ ). Difference scores for fear and anger did not differ significantly depending on whether participants had high-power compared to similar-power,  $t(2\ 8\ 4) = 1.22$ ,  $p = .22$ ,  $d = 0.14$ ;  $t(2\ 8\ 4) = 0.41$ ,  $p = .68$ ,  $d = 0.05$ , respectively. We then added the difference scores from the composite scales of disgust, anger, and fear as mediators in one mediation model using bootstrapping techniques developed by Hayes et al. (2011). Disgust difference scores ( $b = -0.05$ ,  $SE = 0.02$ , 95% CI =  $[-0.09, -0.01]$ )—but not anger or fear difference scores ( $b = 0.01$ ,  $SE = 0.01$ , 95% CI =  $[-0.01, 0.04]$ ;  $b = 0.00$ ,  $SE = 0.00$ , 95% CI =  $[-0.01, 0.01]$ , respectively)—mediated the decrease in moral condemnation as a result of experiencing power.

Now, turning to single emotion items (see Table 3), high power compared to similar power only reduced disgust but no other emotions at time 2. We then added the difference scores for all single emotions as mediators in one mediation model using bootstrapping techniques developed by Hayes et al. (2011). Disgust difference scores ( $b = -0.06$ ,  $SE = 0.02$ , 95% CI =  $[-0.11, -0.02]$ )—but not the difference scores of any other emotions ( $bs < 0.02$ ,  $SEs < 0.02$ ; the 95% CIs all contained 0)—mediated the impact of power on moral condemnation. Lastly, regression analyses yielded no significant interaction effect between power and the composite scale of disgust at time 1 predicting moral condemnation ( $B = -0.08$ ,  $SE = 0.06$ ,  $t(2\ 8\ 5) = -1.41$ ,  $p = .16$ , 95% CI =  $[-0.19-0.03]$   $r_{sp} = -0.08$ ) and no significant interaction effect between power and disgust difference scores predicting moral condemnation ( $B = -0.09$ ,  $SE = 0.12$ ,  $t(2\ 8\ 5) = -1.29$ ,  $p = .20$ , 95% CI =  $[-0.23-0.05]$   $r_{sp} = -0.08$ ).

#### 9.4. Discussion

Study 5 successfully replicates the findings from Studies 3 and 4. Power decreased the moral condemnation of purity transgressions by reducing disgust, and not via other negative emotions. The design in Study 5 also allowed us to statistically control for baseline levels of disgust. Thus, findings from Study 5 suggest that the observed suppressant effect of power on moral judgment is primarily due to power decreasing disgust instead of power increasing reliance on disgust.

<sup>1</sup> Although we did not preregister this analysis, for Study 3 the effect of power on disgust was reduced to non-significance ( $F[1, 264] = 1.92$ ,  $p = .15$ ,  $\eta_p^2 = .01$ ) when anger and fear were added as covariates. For Study 5, the effect of power on disgust remained significant even after the composite scales of anger and fear at time 2 were added as covariates,  $F(1, 282) = 10.78$ ,  $p = .001$ ,  $\eta_p^2 = .04$ .

## 10. Study 6

In Study 6, we measured participants' sense of power, manipulated whether participants experienced disgust through an autobiographical recall task, and measured moral condemnation of impurity. We predicted that power would negatively predict moral condemnation when disgust was not manipulated. However, we predicted that power would be less predictive of moral condemnation when both high-power and low-power participants were made to feel equally as disgusted.

### 10.1. Method

#### 10.1.1. Participants and design

A total of 400 participants were recruited from the Mechanical Turk platform (200 females;  $M_{age} = 35.86$  years,  $SD = 11.89$ ). Participants were randomly assigned to one of two conditions: disgust or control. We aimed to recruit 400 participants, test the interaction between participants' personal sense of power and the disgust manipulation, and preregistered the study at <https://aspredicted.org/blind.php?x=g48ub2>. Four hundred participants thus correspond to 100 participants per "condition" of the 2 (power: high vs. low)  $\times$  2 (disgust: high vs. low) design. We used the same attention check as in the previous studies. One participant in the disgust condition failed the attention check. This participant was not included in the analyses reported in the results section (consistent with our preregistered analysis plan). In addition, for the disgust manipulation, participants were instructed to recall a particular disgust or control situation. We aimed to exclude participants who did not follow instructions—that is, those who wrote nothing, indicated they had never experienced such as situation, copied the experimental manipulation, or wrote 1–2 nonsense words. No participant failed the disgust manipulation. Our final sample consisted of 399 participants ( $N_{disgustcondition} = 192$ ,  $N_{controlcondition} = 207$ ). The exclusion of participants did not differ per condition ( $\chi^2 = [1, n = 400] = 1.08$ ,  $p = .30$ ).

### 10.2. Procedure

#### 10.2.1. Personal sense of power

Participants completed the same power scale as in Study 1 ( $M = 4.93$ ,  $SD = 1.00$ ;  $\alpha = 0.83$ ).

#### 10.2.2. Disgust manipulation

Participants in the disgust condition were instructed to think about a time in which they experienced disgust. Participants in the control condition were instructed to think about the emotions they experienced the last time they went to the grocery store. One coder rated each story participants wrote on a 7-point scale, measuring how disgusted the participant reported being. Confirming the validity of the disgust manipulation, participants described themselves as feeling more disgusted in the disgust condition ( $M = 5.67$ ,  $SD = 1.02$ ) compared to control condition ( $M = 1.75$   $SD = 0.81$ ),  $t(3\ 9\ 8) = 42.59$ ,  $p < .001$ ,  $d = 4.45$ .

#### 10.2.3. Moral condemnation

Participants were confronted with two impure behaviors commonly used in the moral psychology literature (Haidt, 2001). The first scenario described two siblings named Mark and Julie, who decide to engage in sexual intercourse but take all the necessary precautions to avoid pregnancy. The second scenario described a man who purchases a dead chicken, has sex with it in the privacy of his own home, and then cooks and eats it. For each scenario, participants indicated the degree to which the behaviors were morally wrong, morally unacceptable, and immoral ( $\alpha = 0.94$ ). The scenarios were presented to participants in randomized order.

### 10.3. Results

We used a regression analysis to test the interactive effects of power and disgust on moral condemnation. For the first step, disgust (coded as + 1 for disgust and – 1 for control) and power (standardized) were included as predictors. For the second step, the interaction between power and disgust was added. Results demonstrated a main effect of power ( $B = -0.28$ ,  $SE = 0.09$ ,  $t(395) = -3.17$ ,  $p = .002$ , 95% CI =  $[-0.45-0.11]$   $r_{sp} = -0.16$ ), a main effect of the disgust manipulation ( $B = 0.20$ ,  $SE = 0.09$ ,  $t(395) = 2.29$ ,  $p = .022$ , 95% CI =  $[0.03-0.38]$   $r_{sp} = 0.11$ ), and a significant interaction effect between power and disgust,  $B = 0.39$ ,  $SE = 0.09$ ,  $t(395) = 4.52$ ,  $p < .001$ , 95% CI =  $[0.22-0.56]$   $r_{sp} = 0.22$ . Power was more strongly, and negatively, associated with moral condemnation in the control condition ( $B = -0.67$ ,  $SE = 0.12$ ,  $t(205) = 5.44$ ,  $p < .001$ , 95% CI =  $[-0.91-0.42]$ ,  $r_{sp} = -0.36$ ) than in the disgust condition,  $B = 0.11$ ,  $SE = 0.12$ ,  $t(190) = 0.90$ ,  $p = .37$ , 95% CI =  $[-0.13-0.35]$ ,  $r_{sp} = -0.07$ .

### 10.4. Discussion

Study 6 demonstrates that power decreased the moral condemnation of purity transgressions in the control condition. However, the relationship between power and moral judgment was attenuated when both high-power and low-power participants experienced similar levels of disgust. These findings are consistent with the notion that decreased disgust explains why power decreases the moral condemnation of purity transgressions.

## 11. Study 7

We theorized that power holders experience less disgust and condemn impurity less severely because power reduces the need to create distance from a contaminant. Indeed, being exposed to contamination is less likely for power holders and perceived as less risky by power holders (Anderson & Galinsky, 2006). Following this logic, we expected that the impact of power on disgust and judgment would be attenuated when power holders and non-power holders perceive a contaminant as equally as risky and, as a consequence, become equally as motivated to create distance from that contaminant. To test this idea, we drew from research on the reappraisal literature. Previous research indicates that reappraising an event (e.g., thinking that others' sexual activity is not infectious) can shape how the emotion influences perception and behavior (e.g., Feinberg, Antonenko, Willer, Horberg, & John, 2014; Gross, 2002; Jamieson, Mendes, & Nock, 2013; Mooijman & Van Dijk, 2015; Mooijman & Stern, 2016). Inducing power holders to interpret impure behaviors as posing a risk to them should prevent power from decreasing disgust and moral judgment.

### 11.1. Methods

#### 11.1.1. Participants and design

A total of 414 participants were recruited from the Mechanical Turk platform (225 females;  $M_{age} = 34.67$  years,  $SD_{age} = 11.47$ ). Participants were randomly assigned to 2 (high power vs. similar power)  $\times$  2 (threat vs. no threat) between participants design. We aimed to recruit 400 participants (100 per condition) and preregistered the study at <http://aspredicted.org/blind.php?x=qm8zn5>. We used the same attention check as in Study 5. Twenty-one participants failed the attention check. Similar to Studies 2 and 3 and in line with our pre-registration we excluded responses from an additional 18 participants who did not follow instructions with regard to the power manipulation—that is, those who wrote nothing, indicated they had never experienced such as situation, copied the experimental manipulation, or wrote 1–2 non-sense words. Thus, overall, we excluded responses from thirty-nine participants from the analyses that failed the attention

check and/or the power manipulation. Our final sample consisted of 375 participants ( $n_{high-power/threat\ condition} = 101$ ,  $n_{high-power/control\ condition} = 91$ ,  $n_{similar-power/threat\ condition} = 86$ ,  $n_{similar-power/control\ condition} = 97$ ). The exclusion of participants did not differ per condition ( $\chi^2 = [3, n = 414] = 3.0$ ,  $p = .39$ ).

### 11.2. Procedure

#### 11.2.1. Risk appraisal manipulation

Consistent with previous research (e.g., Jamieson et al., 2013), participants in the risk-appraisal condition were provided with information instructing them to think about how the situations described can pose a risk to them personally. Participants were informed to “Please read the following information carefully and try to keep it in mind throughout the course of the study: Research indicates that people often should feel a lot more threatened in response to things that can make them sick or give them an infection (e.g., seeing animal feces on the street). However, people sometimes do not feel threatened enough, even when what they observe or think about could hurt them or others. Thus, please keep in mind that although you might not feel that threatened while reading or thinking about something in this survey, this does not mean that the behavior you will observe should not be threatening or risky to you.” Participants in the control condition did not read any information and continued to the next part of the study (cf. Jamieson et al., 2013; Mooijman & Stern, 2016).

#### 11.2.2. Power manipulation

Depending on condition, participants recalled a powerful or neutral event in their lives. We used the exact same instructions as in Study 3.

#### 11.2.3. Disgust

Participants were confronted with the same two purity transgression as in Study 6. For each scenario, participants indicated how disgusted this made them feel (I feel disgusted, sick to my stomach, nauseous;  $\alpha = 0.95$ ).

#### 11.2.4. Moral condemnation

Participants then indicated the degree to which they considered the impure behaviors immoral. For each transgression separately, participants indicated the degree to which the behaviors were morally wrong, morally unacceptable, and immoral. We randomized the order in which participants answered the moral condemnation questions and averaged all items into one moral-condemnation scale ( $\alpha = 0.97$ ).

#### 11.2.5. Manipulation check

Participants indicated how powerful they felt (i.e., I have a lot of power, control over resources, influence over others;  $\alpha = 0.89$ ). Participants in the high-power condition ( $M = 5.53$ ,  $SD = 1.23$ ) felt more powerful than participants in the similar-power condition ( $M = 4.84$ ,  $SD = 1.42$ ;  $t[373] = 5.05$ ,  $p < .001$ ,  $d = 0.52$ ). Thus, our power manipulation successfully manipulated participants' sense of power.

### 11.3. Results

We first conducted a two-way ANOVA using power and risk appraisal as independent variables and disgust as a dependent variable. For disgust, we observed a main effect of power ( $F[1, 371] = 7.21$ ,  $p = .009$ ,  $\eta_p^2 = 0.02$ ), a main effect of risk appraisal ( $F[1, 371] = 8.27$ ,  $p = .004$ ,  $\eta_p^2 = 0.02$ ), and a significant interaction effect between power and risk appraisal,  $F(1, 371) = 3.97$ ,  $p = .047$ ,  $\eta_p^2 = 0.01$ . Overall, participants in the power condition felt less disgusted ( $M = 5.87$ ,  $SD = 1.70$ ) compared to participants in the control condition ( $M = 6.26$ ,  $SD = 1.19$ ). Participants in the risk-appraisal condition felt more disgusted ( $M = 6.27$ ,  $SD = 1.28$ ) than participants in the control-appraisal condition ( $M = 5.85$ ,  $SD = 1.70$ ). Consistent with

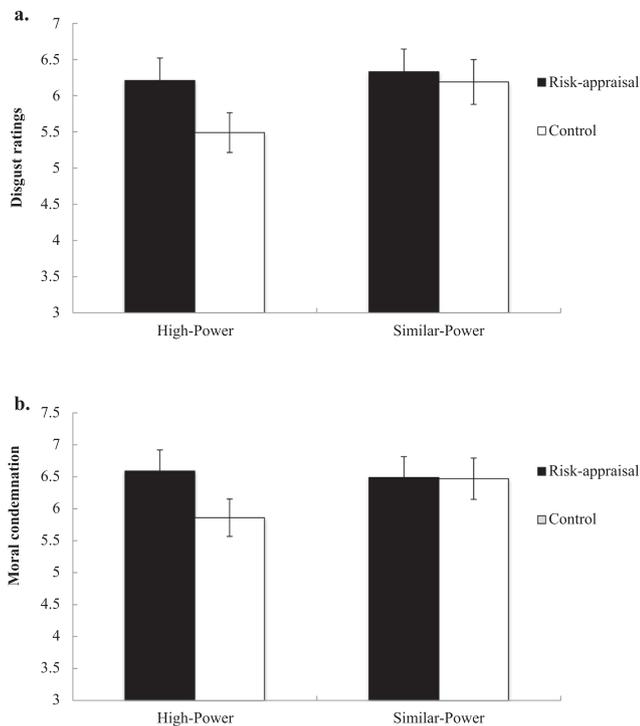


Fig. 2. (a) Disgust as a function of power and risk appraisal. (b) Moral condemnation as a function of power and risk appraisal.

our predictions, participants in the power condition experienced less disgust ( $M = 5.49$ ,  $SD = 1.94$ ) than participants in the control condition ( $M = 6.19$ ,  $SD = 1.23$ ;  $t[186] = 2.99$ ,  $p = .003$ ,  $d = 0.44$ ) when participants read nothing about risk appraisals. No significant difference in disgust between the power condition ( $M = 6.22$ ,  $SD = 1.38$ ) and control condition ( $M = 6.33$ ,  $SD = 1.16$ ;  $t[185] = 0.56$ ,  $p = .58$ ,  $d = 0.08$ ) were observed in the risk-appraisal condition (see Fig. 2, panel A).

We conducted a two-way ANOVA using power and risk appraisal as independent variables and moral condemnation as a dependent variable. For moral condemnation, we observed a main effect of power ( $F[1, 371] = 3.49$ ,  $p = .062$ ,  $\eta_p^2 = 0.01$ ), a main effect of risk appraisal ( $F[1, 371] = 7.49$ ,  $p = .006$ ,  $\eta_p^2 = 0.02$ ), and a significant interaction effect between power and risk appraisal,  $F(1, 371) = 6.72$ ,  $p = .010$ ,  $\eta_p^2 = 0.02$ . Overall, participants in the power condition exhibited less moral condemnation ( $M = 6.24$ ,  $SD = 1.50$ ) than participants in the control condition ( $M = 6.48$ ,  $SD = 1.19$ ). Participants in the risk-appraisal condition exhibited greater moral condemnation ( $M = 6.55$ ,  $SD = 1.11$ ) than participants in the control-appraisal condition ( $M = 6.18$ ,  $SD = 1.55$ ). Participants in the power condition morally condemned impurity less strongly ( $M = 5.86$ ,  $SD = 1.86$ ) than participants in the control condition ( $M = 6.47$ ,  $SD = 1.13$ ;  $t[186] = 2.77$ ,  $p = .006$ ,  $d = 0.41$ ) when participants read nothing about risk appraisals. No significant difference for moral condemnation between the power condition ( $M = 6.59$ ,  $SD = 0.97$ ) and control condition ( $M = 6.49$ ,  $SD = 1.26$ ;  $t[185] = 0.61$ ,  $p = .54$ ,  $d = 0.09$ ) were observed in the risk-appraisal condition (see Fig. 2, panel B).

We then tested whether disgust mediated the interaction effect between power and risk appraisal on moral condemnation using model 8 from the bootstrapping techniques developed by Hayes et al. (2011). Results indicated that disgust was significantly correlated with moral condemnation ( $r = 0.65$ ,  $p < .001$ ) and that disgust mediated the interaction effect of power and risk appraisal on moral condemnation ( $b = -0.17$ ,  $SE = 0.09$ ,  $95\% = [-0.38, -0.01]$ ). Disgust mediated the impact of power on moral condemnation when participants were not instructed to appraise impurity as risky to them ( $b = -0.20$ ,

$SE = 0.07$ ,  $95\% = [-0.37, -0.06]$ ); disgust did not significantly mediate the impact of power on moral condemnation when participants were instructed to appraise impurity as risky to them ( $b = -0.03$ ,  $SE = 0.05$ ,  $95\% = [-0.13, 0.08]$ ).

#### 11.4. Discussion

Study 7 shows that the impact of power on disgust and moral condemnation was attenuated when impurity was appraised as risky. These findings are consistent with our theory that power holders experience less disgust and condemn impurity less severely in part because power reduces the need to create distance to impurity: indeed, when the need to create distance to impurity is increased through increased perceptions of risk, power no longer reduces disgust and moral condemnation.

## 12. General discussion

Powerful individuals such as business leaders evaluate, judge, and punish others for perceived transgressions. Although a wealth of research has shown that the disgust such individuals experience affects their moral judgment (e.g., Chapman et al., 2009; Horberg et al., 2009; Inbar et al., 2009; Olatunji et al., 2016; Tybur et al., 2013; Wheatley & Haidt, 2005), it remained unclear—until now—how having power affects the role of disgust in moral judgment. For instance, does having power increase how disgusted people feel and thereby foster the condemnation of behaviors that tend to make people feel disgusted? Or does power limit the role of disgust in moral judgment through reducing how disgusted people tend to feel? In the present research, we addressed these questions and demonstrated across seven studies that experiencing power tends to reduce the degree to which people feel disgusted<sup>2</sup>. This reduced disgust, in turn, can reduce the moral condemnation of impure behaviors. We also report four additional studies in the Supplemental Materials. Although the sample sizes of these additional studies tend to be small, they demonstrate that power does not reduce the moral condemnation of behaviors that induce little disgust. Taken together, these findings have implications for theory and practice, as detailed below.

First, the current manuscript addresses the theoretical question of whether power can also reduce inhibition tendencies. Across several studies, we find that in the domain of purity, power tends to reduce disgust but not necessarily other negative emotions. Disgust thus seems to be at least one possible exception to approach/inhibition theory's prediction that high-power does not reduce negative emotions because high power does not reduce inhibition tendencies (Keltner et al., 2003). Our theorizing provides an explanation for this exception: power makes people (perceive themselves as) more able to cope with contamination. This primarily reduces disgust. Of course, this explanation is predicated on the notion that there is a unique relationship between disgust and contamination risks (Ekman et al., 1983; Heerdink et al., 2018; Horberg et al., 2009; Landmann & Hess, 2018; Rozin et al., 2008; Wagemans et al., 2018) and on power particularly reducing the degree to which contamination is perceived as risky and dangerous (see Anderson & Galinsky, 2006; Fast et al., 2009; Magee & Smith, 2013). Future research could test the latter proposition in more detail: which environmental threats are less likely to be perceived as dangerous by power

<sup>2</sup> We conducted two p-curve analyses that show that the main effect of power on disgust and moral condemnation shows clear evidence of evidentiary value ( $Z = -4.68$ ,  $p < .0001$ ,  $Z = -2.69$ ,  $p < .01$  for the “right-skew” of the disgust and moral condemnation full p-curve;  $p > .99$  and  $p > .89$  for the full p-curves lacking evidentiary value). For the p-curves, we entered the statistics from the ANOVA's linear effect when we used three conditions. We entered the statistics from the  $t$ -test when we used two conditions or when the study involved a regression analysis.

holders? The present manuscript suggests that contamination risk is an important one. The findings in the current manuscript can, as such, be reconciled with approach/inhibition theory. Experiencing power makes people more confident, risk-taking, and psychologically distant, consistent with power boosting approach tendencies (Keltner et al., 2003). Elevated power, then, lowers the need to create distance to a contaminant, which reduces disgust.

Second, we demonstrate that the relationship between power (high vs. low) and emotions is not linear. Not only is the impact of power on disgust different from the impact of power on other negative emotions, high power and low power also have different (and not simply opposing) effects. High power primarily decreases disgust, whereas low power primarily increases other negative emotions. These findings on low power are consistent with research that shows how low power boosts inhibition tendencies, which boosts negative emotions (Keltner et al., 2003). These findings are also consistent with research that shows how experiencing low power compared to experiencing a neutral state does not impact risk-taking with, feelings of control over, or psychological distance from a contaminant (hence more/less disgust is not needed; Anderson & Galinsky, 2006; Fast et al., 2009; Magee & Smith, 2013). This suggests that the heightened inhibition-tendencies of low-power individuals do not necessarily translate into more disgust. In addition, this raises the possibility that previous findings on power reducing negative emotions such as anger and fear (see Bombari, Schmid-Mast, & Bachmann, 2017) could have been partly the result of contrasting high-power versus low-power conditions. Bombari et al. (2017) design could have obscured the fact that the observed impact of high power on fear and anger was an effect of low power increasing anger and fear. Future research on power and emotions should therefore contrast a high-power condition with a low-power condition and control condition (cf. Schaefer et al., 2018), and explore the role of the domain in which emotions are elicited (e.g., purity vs. non-purity domains).

Third, our findings show that power decreases the moral condemnation of impure behaviors. We found no evidence for power affecting reliance on disgust in the judgment process. Our findings thus speak to whether power affects moral judgment by decreasing how disgusted people feel (e.g., an indirect effect of power through disgust) or by affecting the degree to which people rely on disgust in the decision-making process (e.g., an interaction effect between power and disgust). Previous research has shown that power can increase individuals' responsiveness to their own internal (e.g., bodily) states, thereby possibly increasing reliance on "gut-level" disgust in moral judgment (Guinote, 2007). However, the present findings seem inconsistent with this idea. One possibility is that the impure behaviors we used as stimuli were dominated by strong moral norms and that this prevented power holders from anchoring on their disgust—i.e., a ceiling effect. However, our findings demonstrate that there was sufficient variance in moral judgments and that power reduced moral condemnation by reducing disgust (people thus still took their personal feelings about the behaviors into account). Future research could investigate further when, how, and why power may interact with disgust to predict moral judgment.

Fourth, previous research has shown how power increases moral condemnation (e.g., Lammers, Stapel, & Galinsky, 2010; Van Prooijen et al., 2014; Wiltermuth & Flynn, 2013). The present manuscript suggests, however, that power can decrease the severity of moral judgment when disgust plays a prominent role in these judgments. This implies that the impact of power on moral judgment is not as straightforward as previous research suggested. Instead, the moral domains (see Graham et al., 2013 for a Moral Foundations Theory perspective) in which judgments take place moderate the impact of power on moral judgment. Power may decrease moral condemnation in the purity/sanctity domain (e.g., sexual transgressions) but increase moral condemnation in the harm/care domain (e.g., negligent behavior; Wiltermuth & Flynn, 2013) or fairness/reciprocity domain (e.g., lying to others; Van Prooijen

et al., 2014). Although future research is needed to further understand the interaction between moral domains and power holders' judgments, the present manuscript suggests that the impact of power on moral judgment is more complex than previously assumed.

Fifth, we show that when faced with a purity transgression, power primarily reduces disgust rather than anxiety or fear—closely related emotions. People tend to be disgusted by potentially infectious stimuli (e.g., rotten food) or acts associated with impurity (e.g., someone eating their booger) rather than be fearful or anxious of it. Our results show, for instance, that participants experience high-levels of disgust but lower-levels of fear and anxiety in response to purity transgressions. Disgust is only moderately correlated with anxiety and fear, and fear decreases only slightly when comparing the high-power condition to the similar-power condition in Study 3. Taken together, this suggests that disgust rather than fear or anxiety is most tightly coupled with perceived contamination risks (see also Inbar & Pizarro, 2016; Heerdink et al., 2018; Wagemans et al., 2018) and—because power reduces the perceived danger of contamination—power reduces disgust most strongly. Of course, people are sometimes afraid to catch a disease and power should therefore reduce fear to a degree; the present findings are not completely inconsistent with this idea (high-power reduced fear slightly) but suggest that disgust is a better emotion to focus on when it comes to understanding how the powerful experience and react to purity-transgressions.

Sixth, the findings reported in the present manuscript have practical implications for organizations. Power holders such as business leaders and managers might be inclined to judge employees less harshly for behaviors perceived as "impure" (e.g., poor bodily hygiene) than those with less power would prefer. This can be a positive phenomenon: less moral judgment means more autonomy for employees and less stigmatization of behaviors that are not necessarily harmful to the organization. However, it can also be a negative phenomenon. Employee cooperation is partly based on the perceived legitimacy of (organizational) authorities and the degree to which they uphold moral standards (Mooijman & Graham, 2018). The current manuscript suggests that, instead of undermining authority legitimacy through judging too harshly (e.g., Kirchler, Kogler, & Muelbacher, 2014; Mooijman et al., 2015, 2017, 2018; Van Prooijen et al., 2014; Wiltermuth & Flynn, 2013), power may also undermine authority legitimacy through judging too softly, at least when it comes to behaviors that are related to perceptions of impurity. This also implies that power holders may be at risk of seeming inconsistent to their employees: judging impure behaviors too softly and other transgressions too harshly.

Lastly, we acknowledge that the relationship between power and risk perceptions is a complicated one. Research suggests that power can make individuals more sensitive to potential threats to their power (Case & Maner, 2014; Mead & Maner, 2012; Mooijman et al., 2015). However, the current theorizing revolves around contamination risks that do not pose a direct challenge to an individual's power. Our theorizing is consistent with the theoretically uncontroversial notion that experiencing power makes individuals less focused on, and react less intensely to, certain threats in their social environment (Guinote, 2017; Keltner et al., 2003; Magee & Smith, 2013). Indeed, the findings from Study 2 suggest that power reduces how disgusted people feel instead of how disgusting they consider behaviors. This suggests that the power-disgust relationship revolves around perceptions of personal risk and threat. It also implies that feeling a visceral disgust response is not always the same as the categorization of a stimulus as disgusting. This multidimensionality of disgust has additional implications for moral judgment. Responses that consist primarily of merely "identifying" a behavior as disgusting may not trigger moral responses with the same intensity as those driven by subjective feelings of disgust. Future research should further disentangle these components of disgust and break down its relationship to power.

### 13. Conclusion

We demonstrate that power reduces the degree to which people feel disgusted by impure behaviors. This lower level of disgust, in turn, decreases the degree to which people morally condemn those behaviors. The impact of power on disgust and moral judgment is attenuated when participants are instructed to appraise impure behaviors as posing a risk to them. Taken together, these findings suggest that power decreases moral judgments about others' impure behaviors by reducing felt disgust.

### CRedit authorship contribution statement

**Marlon Mooijman:** Conceptualization, Data curation, Formal analysis, Methodology, Software, Validation, Visualization, Writing - original draft, Writing - review & editing. **Maryam Kouchaki:** Resources, Writing - review & editing. **Erica Beal:** Methodology, Writing - review & editing. **Jesse Graham:** Resources, Writing - review & editing.

### Appendix A. Supplementary material

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.obhdp.2020.04.005>.

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