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Is Prosocial Norm Violation a Pathway to Power?

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in

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by

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The dissertation of Min Zhang is approved, and it is acceptable in quality and form for publication on microfilm and electronically:

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ABSTRACT OF THE DISSERTATION

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This dissertation investigates social reactions to prosocial norm violation, or violating a social norm to help others. I investigated how prosocial norm violation (e.g., wearing inappropriate clothing to advocate for an important cause) separately affects how powerful that person appears to others and how much power people are willing to give to that person.

Across four main studies and five supplementary studies, when a target performed a prosocial action, they were seen as slightly less powerful, but were much less likely to be given a powerful role, when that action was a norm violation (versus norm consistent). When the positive impact of the prosocial action was heightened, the norm violator was seen as just as powerful as the norm follower, but was still less likely to be given power. Mediation analyses suggest that prosocial norm violators were perceived as more agentic than prosocial

norm followers, which increased power perception. However, the violators were also perceived as less communal, which decreased both power perception and power conferral.

In conclusion, prosocial norm violation leads to mixed social outcomes: while prosocial violators were perceived as more agentic, they were also perceived as less communal and less powerful, and were given less power. Prosocial norm violation appears to not be a clear pathway to power.

Chapter 1: Introduction

When Colin Kaepernick, a former NFL football player, refused to stand during the national anthem to protest against police brutality, some claimed that his norm violation behavior was a powerful move that could gain him more power as a sports activist (Bonnell, 2018; Graham, 2018). But many others disagreed because they found it disrespectful and offensive (Breech, 2016; Thiessen, 2017).

Most past research on norm violation has focused on selfish violations that cause the violator to lose power (e.g., Stamkou, et al., 2016). Could prosocial norm violation be a pathway to power? Research on social hierarchy suggests two types of social behaviors can gain power and social influence for the actor. The first type is behaviors that signal that the actor is powerful (e.g., Anderson & Kilduff, 2009b; Palmeira, 2015). The second type is socially engaged behaviors that communicate the actor's friendliness and communality (e.g., Anderson & Kilduff, 2009a; Keltner, Van Kleef, Chen, & Kraus, 2008). Some recent research suggests that violating social norms to benefit others may be able to simultaneously signal power and communality (van Kleef, Homan, Finkenauer, Blaker, & Heerdink, 2012; van Kleef, Homan, Finkenauer, Gündemir, & Stamkou, 2011). In this paper, we test how prosocial norm violations affect how communal and how powerful the violator looks, as well as how much people are willing to give the violator power.

Social reactions to norm violation

Social norms are group-based standards or rules regarding appropriate attitudes and behaviors (R. B. Cialdini & Trost, 1998). Social norms guild people's behaviors and their

judgements about what is appropriate without the formal control of laws (Turiel, 1983). Many norm violations studied in the literature, such as cutting in line, interrupting others in a conversation, littering, or speaking loudly in a library, clearly hurt others' interests. Unsurprisingly, these norm violations often lead to negative social reactions. Anger and blame are two common reactions (Helweg-Larsen & LoMonaco, 2008; Ohbuchi et al., 2004). People may exclude norm violators socially (Hitti, Mulvey, Rutland, Abrams, & Killen, 2014), or assign monetary and other types of punishments to the violators (Chekroun, 2008; Fehr & Fischbacher, 2004). These selfish norm violators are also less likely to gain power or emerge as leaders (Hogg, 2001; Hollander, 1958; Platow & van Knippenberg, 2001; Ridgeway, 1978; Stamkou, van Kleef, Homan, & Galinsky, 2016; Stamkou et al., 2018; van Kleef, et al., 2012).

Recent research has started exploring whether norm violations can also lead to positive social outcomes for the violator. For example, Bellezza, Gino, and Keinan (2014) showed that violators of dress norms (i.e., people who dressed based on their individual taste rather than social norms) can appear more competent and more respected than followers of these norms. van Kleef et al. (2011) showed that violations such as speaking condescendingly or taking coffee without permission can make the violator look more powerful. Stamkou et al. (2018) replicated this effect with a target who violated multiple norms (e.g., being late to a meeting, interrupting others), but only in highly individualistic cultures. [1]In collective

[1] The effect of selfish violation on power perception in the United States sample in Stamkou et al. (2018) was not significant, d = .16 [- .27, .59]. (Personal correspondence, 2019)

cultures, the norm-violating target was perceived as less powerful than a norm-following target.

As evident in the work reviewed above, much of the existing research exploring positive outcomes of norm violation has focused on violations that either do not benefit others (i.e., self-interested violations), or even harm others (i.e., selfish violations). Although norm violations that benefit others should be more likely to inspire positive reactions (Brauer & Chekroun, 2005; Popa et al., 2014), there is little experimental research on how people react to prosocial norm violations. One exception is van Kleef et al. (2012), which suggested people give more power to those who violate a norm to benefit others (e.g., taking coffee to share with others without permission) than those who help without violating norms (e.g., taking coffee to share with others with permission). However, the evidence provided by van Kleef et al. (2012) is limited due to the small sample sizes of its studies: all three studies had fewer than 20 participants per condition. Because inadequately-powered studies are prone to false positives (Ioannidis, 2005; Simmons, Nelson, & Simonsohn, 2011), more well-powered studies are needed to understand the social outcomes of prosocial norm violations.
In the current research, we aim to understand how people react to prosocial norm violations and investigate their implications for power.

Power perception and power conferral

The current research investigates how prosocial norm violator affects: 1) observers' perception of how powerful the violator is (i.e., power perception), and 2) observers' willingness to grant power to the violator (i.e., power conferral). We define power as the

capacity to control others' outcomes (Fiske, 1993; Keltner, Gruenfeld, & Anderson, 2003). Power perception thus refers to perceivers' judgement about an individual's capacity to influence others and control their outcomes (van Kleef et al., 2011). Power conferral refers to others' willingness to grant power to an individual, for example by electing the individual to a powerful role, supporting the individual to gain control over resources, or subjecting themselves to the social influence of that individual (Stamkou et al., 2018; Stamkou et al., 2016; van Kleef et al., 2012).

We investigate both power perception and power conferral because we are interested in whether norm violation has different effects on these two outcomes. Researchers have postulated a positive relationship between power perception and power conferral: appearing powerful can elicit treatment from others that leads to actual power (Palmeira, 2015; Ridgeway, Berger, & Smith, 1985; Smith & Galinsky, 2010; Stamkou et al., 2018; Wakslak, Smith, & Han, 2014). This idea is appealing, especially because there are subtle low-cost behaviors people can enact to signal power, even without having real power (e.g., using abstract language, Ames, Bianchi, & Magee, 2010; Palmeira, 2015; Wakslak, Smith, & Han, 2014). However, acting like a powerful person will not always lead to power conferral. If one's power-signaling behavior is perceived as overclaiming the amount of power one actually has, it instead reduces social acceptance (Anderson, Ames, & Gosling, 2008; Anderson, Srivastava, Beer, Spataro, & Chatman, 2006). Thus, it is important to examine which power signaling behaviors lead to power conferral and which do not. Studying how

prosocial norm violation affects both power perception and power conferral allows us to test whether it is a power-signaling behavior that also leads to more power.

Perceptions of prosocial norm violators

Past research indicates that norm violations give rise to inferences about the violators' agency and communality (Bellezza et al., 2012; van Kleef et al, 2011; van Kleef, et al., 2012), two fundamental dimensions in social perception (Abele & Wojciszke, 2014; Fiske, Cuddy, & Glick, 2007). The agency dimension (e.g., autonomy, assertiveness, competence) relates to goal pursuit and task functioning. The communality dimension (e.g., benevolence, agreeableness, trustworthiness) relates to relationship maintenance and social functioning (Abele & Wojciszke, 2014). Here, we argue that the perceptions of the violator's agency and communality drive the effects of prosocial norm violation on power perception and power conferral.

Perceived agency. Committing a norm violation implies that the violator can act autonomously and assertively, unconstrained by social norms (Bellezza et al., 2012; van Kleef et al, 2011). Indeed, research on selfish/self-interested norm violations has shown that norm violators are perceived as more agentic than norm followers (Bellezza et al., 2012; van Kleef et al, 2011). We hypothesize that these inferences should also apply to prosocial norm violators: prosocial norm violators should be perceived as more agentic than prosocial norm followers.

Perceived communality. By definition, norm violators go against a group's shared understanding of proper conduct. Many everyday norm violations such as cutting in line and

speaking loudly in a library directly hurt other people's interests. Even violations of social conventions such as dress codes or dinning etiquettes, which do not benefit others but cause less tangible harm, can signal that the violator is putting his or her own preferences before social approval. Thus, when norm violations do not benefit others, norm violators should be perceived as less communal. Consistent with this hypothesis, research on violations of interaction norms (e.g., turn-taking) has shown that norm violators are perceived as less communal (e.g., sociable, group-oriented) than norm followers (Hollander, 1960; Ridgeway, 1982; Ridgeway et al., 1985; Robinson & Reis, 1989).

But how do people perceive the communality of prosocial norm violators? We have two competing hypotheses. One hypothesis is that whether a behavior violates social norms (norm violation) and whether the behavior helps or hurts others (social impact) are two separate factors that independently affect the perceived communality of the actor (hereafter referred to as the independent hypothesis). The independent hypothesis states that prosocial norm violators will be perceived as more communal than selfish norm violators, because they helped others. But prosocial norm violators will be perceived as less communal than prosocial norm followers because they violated social norms.

The competing hypothesis is that prosocial norm violators will look more communal than prosocial norm violators. Since norm violations often lead to negative social outcomes for the violator (Brauer & Chekroun, 2005; Chekroun, 2008), committing a prosocial norm violation could send a strong signal of the violator's communality. The costly signal hypothesis states that social impact should moderate the effect of norm violation on perceived

communality. When their behavior benefits others, norm violators should look more communal than norm followers. When their behavior harms others, norm violators should look less communal than norm followers. van Kleef et al. (2012, study 2) provided some initial evidence for this hypothesis. In this study, people watched a video of a prosocial act (closing a window to help others feeling cold) that was either a norm violation (closing the window was prohibited) or not (closing the window was allowed). Participants perceived the prosocial violator as more communal than the prosocial norm follower.

Definition of prosocial norm violation

We define prosocial norm violation as behaviors that infringe on one or more rules of proper conduct while benefiting the welfare of another individual, group, or organization (Morrison, 2006; van Kleef et al., 2012). Prosocial norm violation may also influence the violator him/herself or people other than the beneficiary. But a behavior is only considered prosocial when primarily benefits others (Brief & Motowidlo, 1986). If the primary or sole consequence of the behavior is benefiting the self or causing harm to others, the violation would not be considered prosocial (Morrison, 2006).

We include a broad range of beneficiaries in the definition. Past research has examined violations that benefit one (e.g. van Kleef et al., 2012, Studies 1 and 3) or multiple individuals (e.g. van Kleef et al., 2012, Study 2), as well as violations that benefit a group/organization (Morrison, 2016). Sometimes the group context of the violation behavior is clear, such as when the violator is a member of the social group who benefit from the violation (Morrison, 2016). Other times, there isn't a clear group context, such as when the

violation helps strangers (e.g. van Kleef et al., 2012, Study 2). The current research also varied whether prosocial violations benefited another individual (e.g. Study 1) or a group (e.g. Study 2), as well as its group context (Studies P1 – P5). This allowed us to infer whether the effects of prosocial norm violation were consistent across different types of beneficiaries.

We focus on violations of prescriptive social norm, or what most people approve of as proper conduct (Cialdini & Trost, 1998). Thus, violation of descriptive norms, or what most people do (Cialdini & Trost, 1998), such as artistic innovation (Berger & Packard, 2018; Stamkou, van Kleef, & Homan, 2018) are out of the scope of the current research. This focus distinguishes the current research from research on a related construct: positive workplace deviance, which includes violations of both prescriptive and descriptive norms (e.g. Robinson & Bennett, 1995). We chose to focus on violation of prescriptive norm because we predict violating prescriptive norm will influence perceptions of the violator's agency and communality, which should in turn affect power perception and conferral. These predictions are discussed in detail below. We do not expect simply acting differently from what most people do to have the same effects.

Prosocial norm violation and power perception

Why might prosocial norm violation affect how powerful the violator looks? Past research on power perception suggests that we perceive people as powerful when they act the way high power individuals act (e.g. Galinsky, Gruenfeld, & Magee, 2003; Magee, 2009; Magee & Smith, 2013; Wakslak et al., 2014). For example, high power individuals are more action-oriented (Galinsky et al., 2003), and people perceive action-oriented individuals as

more powerful (Magee, 2009). Along the same lines, we propose that because power affects how agentic and how communal individuals are, acting with agency and communality should influence how powerful they look to others.

Perceived Agency. Power allows individuals to be less influenced by social constraints (Galinsky, Magee, Gruenfeld, Whitson, & Liljenquist, 2008; Whitson et al., 2012). Powerful individuals are more also confident in their own beliefs and judgements (Briñol, Petty, Valle, Rucker, & Becerra, 2007; See, Morrison, Rothman, & Soll, 2011). Thus, people may perceive agentic behaviors that imply autonomy, assertiveness, or confidence as signals of power. Indeed, van Kleef et al. (2011, Study 2) provided initial evidence that perceived agency (measured as perceived autonomy) mediated the effect of selfish norm violation on power perception. Because we hypothesize that prosocial norm violators will also appear more agentic than prosocial norm followers, they should in turn look more powerful.

Perceived Communality. Power has been shown to influence communal behaviors in different ways. Some argue that high power individuals are less communal than low power individuals (Dubois, Rucker, & Galinsky, 2015; Rucker, Dubois, & Galinsky, 2011; Rucker & Galinsky, 2016). There is evidence that high power individuals commit more selfish unethical behaviors and less prosocial unethical behaviors than low power individuals (Dubois, Rucker, & Galinsky, 2015). They also spend more on themselves and less on others (Rucker, Dubois, & Galinsky, 2011). Other researchers argue that power can increase communality in certain contexts such as organizations with a cooperative culture (Tost & Johnson, 2019; Tost, Wade-Benzoni, & Johnson, 2015). They provided evidence that power

led to a sense of responsibility for and solidarity with others and prompted individuals to allocate more resources to others (Scholl, Sassenberg, Ellemers, Scheepers, & de Wit, 2018; Tost & Johnson, 2019; Tost et al., 2015). Yet a third stream of research suggests that power can either increase or decrease communal behaviors depending on the power holder's pre-existing values and chronic goals (Chen, Lee-Chai, & Bargh, 2001; DeCelles, DeRue, Margolis, & Ceranic, 2012; Gordon & Chen, 2013). Given the complexity in how power affects communal behaviors, it is unclear whether people use perceived communality to infer power, and if so, whether they associate communality with high or low power. In the current research, we will conduct exploratory analysis of the relationship between perceived communality and perceived power.

To sum, we hypothesize that prosocial norm violators should look more powerful than prosocial norm followers because they look more agentic. While perceived communality might affect power perception, we do not have a hypothesis on what the relationship is.

Prosocial norm violation and power conferral

Power perception. Why would prosocial norm violation affect how much power people want to give the actor? One possibility is that prosocial norm violation affects power conferral thorough its effect on power perception. As discussed above, people give more power to those who behave in a stereotypically powerful fashion (Anderson & Kilduff, 2009b; Palmeira, 2015; Ridgeway et al., 1985; Smith & Galinsky, 2010; Wakslak et al., 2014). For example, people think those who look more powerful as a result of using more abstract language are more suitable for high-power managerial positions (Palmeira, 2015).

Members who act dominantly in face-to-face groups get more influence over group decision-making (Anderson & Kilduff, 2009b). Stamkou et al. (2018) provided evidence that power perception mediated the effect of selfish norm violation on power conferral: they found a positive indirect effect of power perception in individualistic cultures (although overall selfish violation reduced power conferral). Because we hypothesize that prosocial norm violators will appear more powerful than prosocial norm followers, they should also in turn get more power.

Perceived Communality. A perhaps more important determinant of power conferral is whether people see norm violators as communal individuals, those who will help advance group interests (Keltner et al., 2008). Studies have shown that people who help others and contribute to collective goods achieve more power and influence (e.g., Flynn, 2003; Flynn, Reagans, Amanatullah, & Ames, 2006; Willer, 2009). As discussed above, we had competing hypothesis about how prosocial norm violation would affect perceived communality. The independent hypothesis predicted that prosocial norm violators will appear less communal than prosocial norm followers, and in turn get less power. The costly signal hypothesis predicted that prosocial norm violators will appear more communal than prosocial norm followers, and in turn get more power.

In sum, we hypothesize that power perception and perceived communality will both mediate the effect of prosocial norm violation on power conferral. We predict that people will give prosocial norm violators more power than prosocial norm followers because they look more powerful. While we predict that people will give more power to those who look more communal, as discussed earlier we have competing hypotheses about how prosocial norm

violation affects perceived communality. If prosocial norm violators look more communal than prosocial norm followers, prosocial norm violation should have an overall positive effect on power conferral, as a result of the positive indirect effects of both mediators. If prosocial norm violators look less communal, the overall effect of prosocial norm violation on power conferral will depend on the relative size of the indirect effects.

Overview. We conducted well-powered studies to test the effects of prosocial norm violation on power perception and power conferral in face-to-face interactions (Study 1) and with vignettes (Studies 2-4). We also investigated the underlying mechanisms of why prosocial norm violation affect power perception and power conferral (Studies 2-4). In Study 4, we explored how the size of the prosocial impact affects the effects of prosocial norm violations. Finally, we summarized our findings with a meta-analysis.

Chapter 2: Study 1

In Study 1, we tested the effects of prosocial norm violation in a face-to-face interaction in a two-cell between-subjects design (Norm Violation: Follow norm vs. Violate norm).

Method

Participants. 253 participants participated in this study in the Rady Behavioral Lab for course credit. The average effect size of past research on prosocial norm violation and power conferral was d = 0.94 [0.51, 1.37]. However, since the studies used small samples (i.e., fewer than 20 participants per condition in van Kleef et al., 2012), the effect sizes are likely overestimated (Button et al., 2013). Thus, in all studies, we aimed to have at least 65 participants per condition, which gave us 80% power for detecting a moderate effect size of d = 0.5. We oversampled when possible to get better statistical power.

4 participants (3 in the follow norm condition, 1 in the violate norm condition) were excluded from the analyses because they knew the confederate. 21 participants were excluded (1 in the follow norm condition, 20 in the violate norm condition, $\chi^2(1) = 17.19$, $p < .001$), because they asked a research assistant for another pencil before the confederate offered to help. 16 participants (1 in the follow norm condition, 15 in the violate norm condition, $\chi^2(1) = 7.58$, $p = .006$) were excluded because they reported suspicions about the confederate's behaviors. 212 participants remained in the final analysis (42.9% women, Age M = 21.35, SD = 2.16). Since more participants were excluded in the violate norm condition than the follow norm condition, excluding these participants violates random assignment. The results were

not qualitatively different when we included or excluded these participants. We report the results without exclusions in the supplementary material.

Prosocial norm violation manipulation. Participants were informed that they would work with another participant in a team decision-making task. The other participant was a confederate. An experimenter asked the participant and the confederate to complete a questionnaire while s/he fetch the material for the team task.

The participant and the confederate each received a questionnaire and a mechanical pencil. The participant's pencil was out of lead. Confederates were instructed to check their pencil for extra lead when their partner indicated that his/her pencil did not have lead. In the follow norm condition, confederates had extra lead and shared one with the participant.

In the violate norm condition, confederates did not have extra lead. The confederate then suggested to the participant that there should be extra pens in the room and started looking for one. Inside the room there was a table set up to look like it was prepared for a birthday celebration (Figure 1a). The table set-up was the same in both conditions. There was a birthday balloon, various gifts, and cupcakes on the table. One of the gifts on the table was a nice pen packaged in a clear case, with ribbons decorating the case. While the participant was searching for a pen, the confederate signaled that they had found the pen on the birthday gift table. The confederate then gave his/her own pencil to the participant and took the birthday gift pen for him/herself. We instructed the confederate to say "it's probably someone's birthday gift, but I'll borrow it. I'll just put it back later." (Figure 1b). Video demonstrations of the norm violation manipulation can be found at https://tinyurl.com/yy3fgwek (follow

norm) and https://tinyurl.com/yy7u9zfl (violate norm).

Figure 1. a) Laboratory setup and b) confederate behavior in Study 1

Power perception measure. We used four items from the Sense of Power scale (Anderson, John, & Keltner, 2012) to measure power perception (α = 0.65). Participants reported how powerful their partner looked in his/her relationships with other students at the school [2]by indicating how much they agreed/disagreed with the following statements: "Your partner can get others to listen to what he/she says", "His/her wishes do not carry much weight" (reverse-coded), "He/she can get people to do what he/she wants", and "Even if he/she voices them, his/her views have little sway" (reverse-coded). The items were rated on

[2] In all studies, we asked participants to report how powerful/agentic/communal the target is, relative to others in the relevant social group.

7-point scales labeled with Disagree strongly, Disagree, Disagree a little, Neither agree nor disagree, Agree a little, Agree, Agree strongly.

Power conferral measure. We measured power conferral as the amount of power participants were willing to give to their partner in the team decision-making task. First, participants learned that, in the decision-making task, their team would conduct several investigations using the provided materials to understand a decision-making dilemma and make decisions on behalf of the organization facing the dilemma. They rated the extent to which they 1) would let their partner influence the team's decisions, 2) would depend on their partner in this game, and 3) thought their partner should have control over their team's decisions. Then, they learned that that one of them would be the team leader. The leader would decide which investigation each of them would conduct and had more control over the final decisions. Participants rated to what extent they thought their partner should be the leader. All four questions were rated on seven-point scales with the end points labeled as *Definitely Not 1* and *Definitely 7* ($\alpha = 0.65$).

We counterbalanced the order of the power perception and the power conferral measures.

Suspicion. Participants then answered three open-end questions probing potential suspicion. They wrote about what they thought the purpose of the study was, if there was anything unusual or unexpected in the study, and whether any of their partner's behaviors were unusual or unexpected. They also indicated whether they knew their partner before the study.

Manipulation checks. After the main dependent measures and the open-end questions on suspicion, we asked manipulation check questions. To check the norm violation manipulation, participates rated how much they disagreed or agreed with two statements (α = 0.90): 1) "Sharing the extra lead (follow norm condition) / Using the pen from the birthday gifts table (violate norm condition) violates the social norm in this situation," and 2) "[the behavior] follows the social norm in this situation." To confirm that participants perceived their partner's behavior as prosocial, participants rated how much they disagreed or agreed that 1) "My partner shared the extra lead (follow norm condition) / used the pen from the birthday gifts table (violate norm condition) in order to help me," and 2) "My partner helped me by giving me his/her extra lead (follow norm condition) / giving me his/her pencil and taking the pen from the birthday gifts table for him/herself (violate norm condition)." Note we measured both perception of the confederate's prosocial intention and the consequence of the behavior. All items were rated on seven-point scales labeled as *Disagree strongly* 1to *Agree strongly 7*, with the mid-point labeled as *Neither agree nor disagree 4*.

In the violate norm condition, we also asked participants whether they thought the pen their partner borrowed was a birthday gift (Yes/No). Finally, we collected participants' demographic information and debriefed them. In the debriefing, several participants told us they answered "No" to the whether the pen was a birthday gift question because the manipulation check questions made them realize the pen was setup for the study and not a birthday gift. Thus, we did not use this question in our analyses.

Results

Manipulation checks. As can be seen in Table 1, participants perceived the confederate's behavior as more of a violation in the violate norm condition than in the follow norm condition, $t(195) = 11.74$, $p < .001$

Participants perceived the confederate's prosocial intention as stronger in the follow norm condition (M = 6.35, SD = 1.01) than the violate norm condition (M = 5.95, SD = 1.53), $t(194) = -2.16$, $p = .032$, d = -0.31 [-0.59, -0.03]. There was no significant difference in perceived prosocial consequence (M_{follow} = 6.39, SD_{follow} = 1.07; M_{follow} = 6.27, SD_{follow} = 1.10), $t(194) = -2.16$, $p = .032$, d = -0.31 [-0.59, -0.03]. We also averaged the prosocial intention and prosocial consequence ratings as the manipulation check for prosociality. Participants perceived the confederate's behavior as prosocial (M = 6.24, SD = 1.07). There was no significant difference in perception of the prosocial nature of the confederate's behavior between the violate norm condition and the follow norm condition, $t(193) = -1.77$, $p = .078$, although directionally norm violating was perceived as less prosocial (see Table 2).

The order of the power perception and power conferral measures did not moderate any norm violation effects. Thus, we collapsed the two orders.

Table 1. Norm Violation Manipulation Check Results

	Follow Norm M (SD)	Violate Norm M (SD)	Effect Size d [95% CI]
Study 1	1.96 (0.95)	4.14 (1.58)	1.69 [1.36, 2.01]
Study 2 Pretest	3.28 (1.62)	5.36 (1.30)	1.42 [1.11, 1.73]
Study 3 Pretest	2.58 (1.14)	5.61 (1.2)	2.59 [2.20, 2.98]
Study 4 Pretest	2.04 (1.22)	5.85 (1.27)	3.06 [2.77, 3.35]

Table 2. Effects of the Norm Violation Manipulation on Perceived Social Impact

	Follow Norm M (SD)	Violate Norm M (SD)	Effect Size d [95% CI]
Study 1	6.38 (1.01)	6.11 (1.11)	-0.25 [-0.54, 0.03]
Study 2 Pretest	2.92 (2.04)	1.8 (2.01)	-0.55 [-0.84, -0.27]
Study 3 Pretest	2.15 (1.84)	0.62 (2.02)	-0.79 [-1.09, -0.50]
Study 4 Pretest	3.91 (2.04)	3.26 (2.19)	-0.31 [-0.51, -0.11]

Power perception. There was no significant difference in power perception of the confederate between the violate norm condition and the follow norm condition, $t(205) = -0.94$, $p = .348$ (see Table 3).

Power conferral. Participants gave less power to the confederate in the violate norm condition than in the follow norm condition, $t(204) = -1.98$, $p = .049$ (Table 3).

Table 3. Effects of the Norm Violation Manipulation on Main Dependent Measures

	Follow Norm M (SD)	Violate Norm M (SD)	Effect Size d [95% CI]
Study 1			
Power Perception	4.97 (0.82)	4.86 (0.74)	-0.13 [-0.41, 0.14]
Power Conferral	4.7 (0.89)	4.48 (0.69)	-0.28 [-0.55, 0.00]
Study 2			
Power Perception	4.78 (0.78)	4.62 (0.9)	-0.19 [-0.42, 0.04]
Power Conferral	5.2 (0.84)	4.75 (1.28)	-0.42 [-0.65, -0.19]
Agency	5.3 (0.66)	5.38 (0.75)	0.12 [-0.11, 0.35]
Communality	5.23 (0.75)	4.76 (0.89)	-0.56 [-0.79, -0.33]
Study 3			
Power Perception	4.49 (0.72)	4.15 (0.91)	-0.42 [-0.67, -0.18]
Power Conferral	4.68 (1.22)	3.88 (1.37)	-0.62 [-0.86, -0.37]
Agency	4.75 (0.89)	5.41 (0.87)	0.74 [0.49, 1.00]
Communality	5.03 (0.81)	4.16 (0.99)	-0.96 [-1.22, -0.71]
Study 4			
Power Perception	4.83 (0.84)	4.68 (0.96)	-0.16 [-0.26, -0.06]
Power Conferral	5.26 (1.01)	4.89 (1.37)	-0.30 [-0.40, -0.19]
Agency	5.19 (0.76)	5.66 (0.81)	0.60 [0.49, 0.70]
Communality	5.45 (0.82)	5.01 (0.98)	-0.49 [-0.59, -0.38]

Robustness checks. We also analyzed the effects on power perception and power conferral with linear mixed effects models, to account for the random effects of different confederates. The results of the linear mixed effects models were consistent with the t-tests reported above. Norm violation did not affect power perception but had a marginally significant negative effect on power conferral. We reported estimate of norm violation fixed effect as well as the random effects of confederates in Table 4 and Table 5.

Table 4. Results of Power Perception Linear Mixed Effect Model in Study 1

Predictors	*Estimates*	*CI*	*p*
(Intercept)	4.97	[4.81, 5.12]	<0.001
Violate	-0.10	[-0.32, 0.11]	0.348
Random Effects			
σ^2	0.61		
$\tau_{00\ Confederate}$	0.00		
$ICC_{Confederate}$	0.00		

Table 5. Results of Power Conferral Linear Mixed Effect Model in Study 1

Predictors	*Estimates*	*95% CI*	*p*
(Intercept)	4.70	[4.54, 4.85]	<0.001
Norm Violation	-0.22	[0.44, -0.00]	0.051
Random Effects			
σ^2	0.63		
$\tau_{00\ Confederate}$	0.00		
$ICC_{Confederate}$	0.00		

Exploratory analyses on gender. Both participant gender and confederate gender (and their interaction) may affect power perception and power conferral. Thus, we tested the three-way interaction between norm violation, participant gender, and confederate gender. We did not find any gender moderation on power perception or power conferral. Full results are reported in Table 6 and Table 7.

Table 6. Gender Moderation of Power Perception in Study 1

Effect	F	df_1	df_2	p	$\hat{\eta}_G^2$
Participant Gender	2.91	1	192	.090	.015
Confederate Gender	1.10	1	192	.295	.006
Norm Violation	0.68	1	192	.412	.004
Participant Gender × Confederate Gender	0.00	1	192	.946	.000
Participant Gender × Norm Violation	0.46	1	192	.499	.002
Confederate Gender × Norm Violation	0.23	1	192	.632	.001
Participant Gender × Confederate Gender × Norm Violation	1.87	1	192	.173	.010

Table 7. Gender Moderation of Power Perception in Study 1

Effect	F	df_1	df_2	p	$\hat{\eta}_G^2$
Participant Gender	0.83	1	192	.362	.004
Confederate Gender	1.89	1	192	.170	.010
Norm Violation	4.48	1	192	.036	.023
Participant Gender × Confederate Gender	0.19	1	192	.662	.001
Participant Gender × Norm Violation	0.10	1	192	.748	.001
Confederate Gender × Norm Violation	0.19	1	192	.663	.001
Participant Gender × Confederate Gender × Norm Violation	0.60	1	192	.440	.003

Study 1 results without exclusions.

Without exclusions, 253 Rady undergraduate students were in the analyses (39.1% women, Age *M* = 21.37, *SD* = 2.29). The results without exclusions were very similar to those with exclusion. We noted differences below.

Manipulation checks. Participants perceived the confederate's behavior as more a of violation in the norm violation condition (*M* = 4.25, *SD* = 1.58) than in the follow norm condition (*M* = 1.95, *SD* = 0.95), $t(212) = -12.66$, $p < .001$, *d* = 1.80 [1.48, 2.12].

Participants perceived confederate as less prosocial in the norm violation condition (*M* = 6.10, *SD* = 1.11) than the follow norm condition (*M* = 6.39, *SD* = 1.00), $t(210) = 1.99$,

$p = .048$, *d* = -0.28 [-0.55, 0.00]. This difference was marginally significant when we applied exclusions.

Power perception. There was no significant difference in power perception of the confederate between the norm violation condition (*M* = 4.88, *SD* = 0.72) and the follow norm condition (*M* = 4.96, *SD* = 0.82), $t(224) = 0.83$, $p = .410$, *d* = -0.11 [-0.37, 0.15].

Power conferral. Participants reported they would give less power to the confederate in the norm violation condition (*M* = 4.46, *SD* = 0.70) than in the follow norm condition (*M* = 4.70, *SD* = 0.89), $t(222) = 2.20$, $p = .029$, *d* = -0.29 [-0.56, -0.02].

Discussion

In Study 1, participants directly benefited from confederates' prosocial behavior in face-to-face interactions. Inconsistent with our hypothesis, whether the confederates helped through violating or following a norm did not affect how powerful the confederate appeared. Moreover, participants were less willing to give power to the prosocial norm violators than the prosocial norm followers in an upcoming team task. To unpack these effects of prosocial norm violation, we need to measure perceptions of the actor's agency and communality. In Studies 2-4, we did so 1) to test our hypothesis that the prosocial norm violator would appear more agentic and our competing hypotheses about how prosocial norm violation would affect perceived communality and 2) to understand how agency and communality perceptions drive the effects on power perception and power conferral.

Chapter 3: Study 2

Study 2 had a two-cell between-subject vignette design (Norm Violation: Follow norm vs. Violate norm). To examine the mechanisms underlying prosocial norm violation effects, we measured agency and communality perceptions. Study 2 also used a different type of norm violation manipulation than our other studies. In Studies 1, 3, and 4, we manipulated norm violation by varying confederates' behavior between conditions. In Study 2, we instead varied the norm between conditions and kept the target's behavior constant. This allowed us to control for any differences in the target's behaviors unrelated to whether it violated social norms.

Method

Participants. 299 people participated through Amazon Mechanical Turk (Mturk, 41.50% women, Age M = 35.18, SD = 11.58).

Prosocial norm violation manipulation. Participants read a scenario about a university staff member, Taylor. In the norm violation condition, participants read that:

> Her department maintains an internal online notice board, where students, staff, and faculty can post information about professional events. On this internal notice board, the common understanding is that members should only post professional events that serve the chemistry students, staff, and faculty. People are expected to post events that are clearly relevant for academics and/or professional networking.

In the follow norm condition, participants read that departmental members:

> can post information about local events, interest groups, and various topics that might interest people within the department. On this internal notice board, the common understanding is that members should only post events that are open

> to the members of the department. People are expected to post events department members could participate in or attend.

In both conditions, Taylor posted information about a town hall meeting, which would be beneficial to departmental members. Participants learned that:

> The city is repairing a few roads and building a new transit center. The constructions might increase traffic and generate noise in several residential neighborhoods. Many university employees live in these neighborhoods. There is a town hall meeting for people to learn about the construction plan and provide feedback.

Pretest. We pretested this prosocial norm violation manipulation with a separate sample of 100 Mturk workers (41% women, Age M = 34.41, SD = 10.92). As a manipulation check for the norm violation manipulation, we asked participants how much Taylor's post 1) violated the social norms in the situation, 2) deviated from others' expectation, 3) followed the social norm (reverse-coded) and 4) complied with the social expectations of others (reverse-coded), all rated on 7-point scales (1 = Not at all, 7 = Completely). The norm violation manipulation was successful: participants perceived target's behavior as more of a norm violation in the violate norm condition than in the follow norm condition, $t(97.78) = -8.61$, $p < .001$(Table 1).

In addition, to test whether participants perceived the behavior as beneficial to others, we also measured perceived social impact of the target's behavior. Participants reported how much they agreed or disagreed with Taylor's post being 1) helpful to an important cause, 2) beneficial to others, 3) harmful to an important cause (reverse-coded), and 4) harmful to others (reverse-coded) on 7-point scales labeled with Disagree strongly, Disagree, Disagree a

little, Neither agree nor disagree, Agree a little, Agree, Agree strongly. The average was calculated as an indicator of perception of the net social impact. Participants did perceived target behavior as generating a positive social impact, $M = 3.23$, 95% CI [2.82, 3.65], $t(99) = 15.52$, $p < .001$. Participants also perceived following norm as generating a more positive net social impact than violating norm, $t(98) = 2.89$, $p = .005$ (Table 2). Below, we also report the effects of prosocial violation on perceived benefit and perceived harm on others and on an important cause in Table 8. People perceived violating norm as less beneficial than violating norm both for others and for an important cause. They also perceived violating norm as more harmful than following norm both for others and for an important cause.

Table 8. Effects of the Norm Violation Manipulation on Perceived Benefit and Harm

	Follow Norm M (SD)	Violate Norm M (SD)	Effect Size d [95% CI]
Study 2 Pretest			
Benefit Others	4.61 (1.91)	4.07 (1.81)	-0.29 [-0.57, -0.01]
Benefit Cause	2.21 (1.51)	2.91 (1.73)	-0.54 [-0.83, -0.26]
Harm Others	5.63 (0.99)	5.01 (1.29)	0.43 [0.15, 0.71]
Harm Cause	2.2 (1.57)	2.58 (1.76)	0.23 [-0.05, 0.51]
Study 3 Pretest			
Benefit Others	4.65 (1.37)	3.64 (1.47)	0.71 [0.41, 1.00]
Benefit Cause	2.37 (1.38)	2.83 (1.46)	0.42 [0.13, 0.71]
Harm Others	4.46 (1.58)	3.78 (1.65)	-0.32 [-0.61, -0.03]
Harm Cause	2.44 (1.35)	3.35 (1.56)	-0.62 [-0.92, -0.33]
Study 4 Pretest			
Benefit Others	5.76 (1.12)	5.54 (1.19)	0.20 [0.00, 0.39]
Benefit Cause	1.85 (1.33)	2.22 (1.45)	0.09 [-0.10, 0.29]
Harm Others	5.82 (1.19)	5.71 (1.15)	-0.27 [-0.47, -0.07]
Harm Cause	1.92 (1.39)	2.52 (1.65)	-0.39 [-0.59, -0.20]

Power perception measure. We measured perception of the target's power with the Sense of Power Scale (Anderson, John, & Keltner, 2012) (α = 0.8), asking participants how much power they thought Taylor had in relation to her colleagues.

Power conferral measure. We told participants that Taylor was running to be the head of the employee senate in her department and asked them five questions about how much power they would like Taylor to have in the employee senate, if they were employees in

her department (α = 0.92). [3] The questions were how likely they would "support Taylor to be the head of the senate", how likely Taylor "would be an effective leader", "how much power Taylor should have in the senate", and "how much influence Taylor should have over the operations of the senate". Participants responded on seven-point rating scales (1 = Very unlikely, 7 = Very likely for the first two questions, 1 = Very little, 7 = A lot for the last two questions).

Perceived agency measure. We operationalized perceived agency as how autonomous and how assertive the target appeared. Participants rated the extent to which 1) Taylor felt free to do what he wants and 2) Taylor's behavior was a product of her own volition, on seven-point scales (1 = Not very much, 7 = Very much) (Magee, 2009). They also rated how much they perceived Taylor as assertive and dominant, as compared to an average student at his college, on seven-point rating scales (1 = Much less, 4 = Not more or less, 7 = Much more). We averaged these four ratings as the perceived agency measure (α = 0.63).

Perceived communality measure. Participants rated how much they perceived Taylor as, friendly, sociable, responsible, principled, as compared to an average student at his

[3] To make sure that participants understood giving power to the target could have significant impact on the relevant social group (the employee in the university in Study 2), we told participants about what impact the target could make through this powerful position. For example, in Study 2, we told participants: "The employee senate has major impact in the chemistry department. It controls resources for improving employee job satisfaction. It also oversees various professional development and employee wellbeing programs." In Studies 3-4, we also added similar descriptions.

college, on seven-point rating scales (1 = Much less, 4 = Not more or less, 7 = Much more) (Goodwin, Piazza, & Rozin, 2014).

Finally, participants reported how much they liked Taylor on a seven-point scales (1 = I dislike Taylor a lot, 4 = I don't like or dislike Taylor, 7 = I like Taylor a lot) before they answered demographic questions. We report results on liking in this and the following studies in the supplementary material since they are not central to this dissertation. Generally, people always liked the norm violator less than the norm follower.

Results

Power perception. Consistent with Study 1, power perception did not differ significantly when the target followed norm versus violated norm followed the norm, $t(296) = 1.62$, $p = .106$ (All descriptives and confidence intervals are reported in Table 3).

Power conferral. Also consistent with Study 1, participants were less willing to give power to the norm-violating target than the norm-following target, $t(297) = 3.62$, $p < .001$.

Perceived agency. Contrary to our hypothesis, there was no difference in how agentic the norm-following target and the norm-violating target appeared, $t(297) = -1.05$, $p = .293$.

Perceived communality. Consistent with the independent hypothesis, the norm-violating target was perceived as less communal than the norm-following target, $t(297) = 4.86$, $p < .001$.

Liking. Participants liked the norm violator ($M = 4.70$, $SD = 1.31$) less than the norm follower ($M = 5.22$, $SD = 0.99$), $t(297) = 3.88$, $p < .001$, $d = -0.45$ [-0.68, -0.22].

Mediation analysis for power perception. We ran a mediation model for the effect of prosocial norm violation (follow norm coded as 0, violate coded as 1) on power perception with perceived agency and perceived communality as mediators (Model 4 in the SPSS Process Macro) (Hays, 2013). Estimates of direct and indirect effects based on bootstrap analysis of 5,000 simulations are reported in Table 4. There was no significant indirect effect of perceived agency, as prosocial norm violation did not have a significant impact on perceived agency. We did find a negative indirect effect of perceived communality: the prosocial violator was perceived as less communal than the prosocial norm follower, and in turn perceived as less powerful.

Mediation analysis for power conferral. We ran a similar mediation model for power conferral, adding power perception as a mediator in addition to perceived communality and perceived agency (Table 4). There was no significant indirect effect of power perception or perceived agency, as prosocial norm violation did not have a significant impact on these variables. We again found a negative indirect effect of perceived communality: the prosocial violator was perceived as less communal, and in turn got less power.

Table 9. Study 2 Mediation Results

		Power perception	Power Conferral
Direct Effect		-.06 [-.25, .13]	-.11 [-.30, .09]
Indirect effects	Agency	.01 [-.01, .05]	.01 [-.01, .04]
	Communality	**-.11 [-.20, -.03]**	**-.31 [-.45, -.18]**
	Power Perception	-	-.05 [-.14, .01]

Note. Significant indirect effects are in boldface.

Discussion

Study 2 replicated the findings of Study 1: prosocial norm violation did not significantly impact perception of the actor's power, but it reduced the amount of power conferred to the actor. Perceptions of the actor' agency and communality shed some light on what drove these effects. We had hypothesized that prosocial norm violators would look more powerful than the prosocial norm followers because they would look more agentic. However, in Study 2, prosocial norm violation did not have a significant effect on perceived agency. Past research has shown that selfish/self-interested norm violations can make the violators look more agentic (Bellezza, et al., 2012; van Kleef, et a., 2011). We predicted the same effect for prosocial norm violation. It is unclear why we did not find this effect. One possibility is that some participants thought the violation was unintentional, since it is easy to imagine someone posting information in the wrong place by accident. Bellezza et al. (2012) showed that people do not infer agency from unintentional violations. To mitigate this potential problem, in Studies 3-4, we used a norm violation manipulation that was perceived as intentional in Bellezza et al. (2012). In Study 3, we also included both prosocial and self-interested norm violations to test our prediction that they should both increase perceived agency.

We had competing hypothesis on how prosocial norm violation would affect perceived communality. The data in Study 2 was consistent with the independent hypothesis: prosocial norm violators were perceived as less communal than prosocial norm followers. Pretest

results on perceived social impact also corroborated this finding: participants perceived violating a norm as producing a less positive net social impact than following a norm.

Perceived communality drove the effects of prosocial norm violation on both power perception and power conferral. Study 2 results showed that appearing less communal by violating a norm is perceived as less powerful. Study 2 results also supported our hypothesis on the positive relationship between perceived communality and power conferral: because prosocial norm violators appeared less communal, they got less power.

Chapter 4: Study 3

Study 3 had a 2 (Norm Violation: Follow norm vs. Violate norm) * 2 (Social Impact: Self-interested vs. Prosocial) between-subjects design. In this study, we tested the hypothesis that norm violators (prosocial and self-interested) should be perceived as more agentic than norm followers, while ensuring that the violation is perceived as intentional. We used violating a dress code as the norm violation manipulation, which was shown to be perceived as intentional by default (Bellezza, et al., 2012). We also included a self-interested condition in addition to the prosocial condition.

Method

Participants. 271 undergraduate students from the Rady Behavioral Lab participated in this study in exchange for course credit (54.20% women, Age M = 21.03, SD = 2.39).

Norm violation manipulation. Participants read about a scenario describing a college student Alex attending a "end-of-year formal" event at his school. Participant first learned about the social norm:

> The formal has a dress code created by the student body. People who attend are expected to show up in formal clothes. Men are supposed to wear a dress shirt and suit. Women are supposed to wear a formal dress of the proper length and style. Everyone is free to wear accessories of their choosing.

In the follow condition, Alex "wore a suit with dress shoes and a pin on his suit, in line with the dress code." In the violate condition, Alex *"*however, wore a t-shirt to the formal, which goes against the dress code."

Social impact manipulation. In the self-interested condition, where Alex's behavior followed his own preference but did not have a clear positive or negative impact on others, participants read:

> The pin/t-shirt he wore featured his favorite band. The pin/t-shirt showed the band's logo and a line from one of their songs. In conversations with several other students at the formal, Alex told them about his music interests and his favorite band.

In the prosocial condition, where Alex's behavior benefitted others, participants read:

> The pin/t-shirt he wore featured "MindWise," a student organization helping students to maintain social and emotional well-being. MindWise provides resources to all students on campus for managing academic, social, and financial stress. The pin showed MindWise's mission statement and logo. In conversations with several other students at the formal, Alex told them about the work MindWise was doing at the school and how they may find useful resources through the organization.

Pretest. We ran a pretest of the manipulations with 189 undergraduate students from the Rady Behavioral Lab (52.90% women, Age M = 20.88, SD = 1.75), using the same measures for norm violation perception and social impact perception as Study 2. The norm violation manipulation was successful. Dressing casually was perceived as more of a norm violation than dressing formally, $F(1,185) = 314.77$, $p < .001$, $\hat{\eta}^2_G$=.630. (Table 1). The social consequence manipulation did not affect perception of norm violation, $F(1,185) = 0.13$, p = .722, $\hat{\eta}^2_G$= .001, nor was there an interaction, $F(1,185) = 0.06$, p = .808, $\hat{\eta}^2_G$= .000.

The social impact manipulation was also successful. Participants perceived the prosocial behavior as generating a more positive net impact (M = 2.16, SD = 2.19) on others than the self-interested behavior (M = 3.84, SD = 2.12), 95% CI 0.82 [0.52, 1.12], $F(1,185)$ =

37.28, $p < .001$, $\hat{\eta}_G^2 = .168$. Like Study 2, participants also perceived violating norm as producing a less positive net impact than following norm, $F(1,185) = 35.44$, $p < .001$, $\hat{\eta}_G^2 = .161$ (Table 2). There was no interaction effect, $F(1,185) = 0.31$, $p = .576$, $\hat{\eta}_G^2 = .002$. When examining the four social impact manipulation check questions separately, we also did not find any interaction effects of norm violation and social impact manipulations. Participants perceived the self-interested behavior (showing favorite band) as less beneficial than the prosocial behavior (advocating for student mental health), to both others and an important cause (Table 10). But there was no difference between the self-interested and the prosocial behavior in perceived harm (Table 10). In addition, consistent with Study 2, people perceived violating norm as less beneficial and more harmful than violating norm both for others and for the important cause (Table 8).

Table 10. Effects of the Social Impact Manipulation on Perceived Benefit and Harm in Study 3 Pretest

	Self-interested M (SD)	Prosocial M (SD)	Effect Size d [95% CI]
Benefit Others	3.52 (1.41)	4.75 (1.34)	-0.90 [-1.20, -0.60]
Benefit Cause	2.68 (1.44)	2.53 (1.44)	-1.18 [-1.49, -0.87]
Harm Others	3.27 (1.48)	4.95 (1.36)	0.10 [-0.19, 0.39]
Harm Cause	2.96 (1.57)	2.83 (1.49)	0.08 [-0.21, 0.37]

Power perception and power conferral measures. We used the power perception and power conferral measures from Study 2, adapting the questions to this scenario. For

power perception, we asked participants how much power Alex had in his relationships with other students at his school (α = 0.82). For power conferral, we told participants Alex was running to be an executive officer in the undergraduate student association and asked them how much power they would like Alex to have in the undergraduate student association, if they were students at his college (α = 0.92).

Perceived agency and perceived communality measures. We used the same perceived agency (α = 0.66) and perceived communality (α = 0.76) measures as Study 2.

Other measures. Like Study 2, participants reported how much they liked Alex. They also reported whether they were familiar with events with a formal dress code (7-point scale, 1 = Not familiar at All, 7 = Extremely familiar), before demographic questions.

Results

Participants reported to be fairly familiar with situations involving formal dress codes (M = 5.25, SD = 1.68). We used two-way ANOVAs to test the effects of norm violation and social impact on the outcome variables. The descriptives and confidence intervals are reported in Table 3.

Power perception. Participants perceived the target as less powerful when he violated the dress norm than when he followed the dress norm, $F(1,264) = 11.95$, $p = .001$, $\hat{\eta}_G^2 = .043$. The social consequence manipulation did not affect power perception, $F(1,264) = 0.30$, $p = .585$, $\hat{\eta}_G^2 = .001$. There was no interaction effect, $F(1,264) = 0.20$, $p = .656$, $\hat{\eta}_G^2 = .001$. (see Figure 2)

Power conferral. Participants were less willing to give power to the target who violated the dress norm than when he followed the dress norm, $F(1,264) = 26.85$, $p < .001$, $\hat{\eta}_G^2$=.092. Participants were also more willing to give power to the prosocial target (M = 4.58, SD = 1.23) than the control target (M = 4, SD = 1.41), $F(1,264) = 14.12$, $p < .001$, $\hat{\eta}_G^2$=.051. There was no interaction, $F(1,264) = 0.62$, p = .432, $\hat{\eta}_G^2$= .002. (see Figure 2)

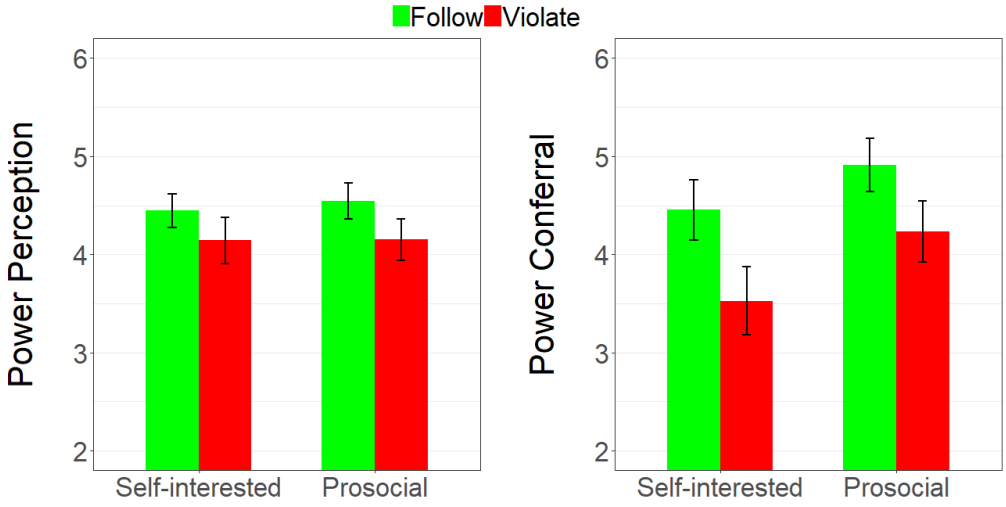

Figure 2. Power Perception and Power Conferral Results in Study 3
Notes. Error Bars Reflect 95% Confidence Intervals.

Perceived agency. Consistent with our hypothesis, participants perceived the norm violator as more agentic than the norm follower, $F(1,255) = 36.51$, $p < .001$, $\hat{\eta}_G^2$= .125. They also perceived the target as more agentic in the prosocial condition (M = 5.41, SD = 0.87)

than in the self-interested condition (M = 4.75, SD = 0.89), $F(1,255) = 7.18$, $p = .008$, $\hat{\eta}_G^2 = .027$. There was no interaction effect, $F(1,255) = 0.19$, $p = .664$, $\hat{\eta}_G^2 = .001$.

Perceived communality. Consistent with Study 2, participants perceived the norm violator as less communal than the norm follower, $F(1,257) = 66.07$, $p < .001$, $\hat{\eta}_G^2 = .205$. Unsurprisingly, they also perceived the target as less communal in the self-interested condition (M = 5.03, SD = 0.81) than in the prosocial condition (M = 4.16, SD = 0.99), $F(1,257) = 25.20$, $p < .001$, $\hat{\eta}_G^2 = .089$. There was no interaction effect, $F(1,257) = 0.54$, $p = .464$, $\hat{\eta}_G^2 = .002$. These results provided direct support for the independent hypothesis on the effect of norm violation on perceived communality.

Liking. Participants liked the norm violator (M = 3.98, SD = 1.38) less than the norm follower (M = 4.44, SD = 1.05), $F(1,264) = 9.43$, $p = .002$, $\hat{\eta}_G^2 = .034$, d = 0.37 [0.13, 0.62]. There was no effect of social impact, $F(1,264) = 2.14$, $p = .145$, $\hat{\eta}_G^2 = .008$, nor interaction, $F(1,264) = 2.47$, $p = .117$, $\hat{\eta}_G^2 = .009$.

Mediation analysis for power perception. We ran a moderated mediation model for the effect of norm violation on power perception with perceived agency and perceived communality as mediators and the social impact condition (self-interested coded as 0, prosocial coded as 1) as the moderator (Model 7 in the SPSS Process Macro) (Hays, 2013). Estimates based on bootstrap analysis with 5,000 simulations are reported in Table 11. We did not find evidence for moderated mediation. Perceived agency and perceived communality

both mediated the effect of norm violation on power perception, although their indirect effects were similar in size and in opposite directions. Perceived agency had a positive indirect effect: participant perceived the norm violator as more agentic than the norm follower, and thus more powerful, supporting our hypothesis. Consistent with Study 2, perceived communality had a negative indirect effect: the norm violator was perceived as less communal, and in turn less powerful.

Mediation analysis for power conferral. We ran a similar moderated mediation model for power conferral. In addition to perceived communality and perceived agency, we also added power perception as a mediator (Table 11). Again, we did not find any moderated mediation. Power perception and perceived communality both had negative indirect effects: the norm violator was perceived less powerful and less communal, and thus got less power. Notably, the indirect effect of perceived communality was stronger than the indirect effect of power perception.

Table 11. Study 3 Mediation Results

	Power perception			Power Conferral		
Direct Effect		-.33[-.55, -.10]			-.24[-.56, - .09]	
Indirect effects	Moderated Mediation Index	Self-interested Estimate	Prosocial Estimate	Moderated Mediation Index	Self-interested Estimate	Prosocial Estimate
Agency	.03[-.10, .16]	**.18 [.08, .33]**	**.21 [.09, .35]**	.01[-.05, .08]	.07 [-.04, .20]	.08[-.05,.23]
Communality	.04[-.06, .17]	**-.25 [-.41, -.12]**	**-.20 [-.35, -.09]**	.10[-.15, .35]	**-.56[-.81, -.35]**	**-.46[-.70, -.25]**
Power Perception		-	-	.06[-.25, .12]	-.12[-.28, .00]	-.18[-.33, .06]

Note. Significant indirect effects are in boldface.

Discussion

In Study 3, we found that prosocial norm violation decreased power perception. Throughout Studies 1-3, we did not find support for our original hypothesis that prosocial norm violators are perceived as more powerful than the prosocial norm follower. In Study 3, using a violation manipulation shown to be perceived as intentional, prosocial (and self-interested) norm violators did look more agentic than norm followers. Mediation analysis also showed that the increase in perceived agency in turn made the violators look more powerful. However, in addition to perceived agency, participants also used perceived communality as a cue to infer power. Prosocial and self-interested violators were perceived as less communal, and thus less powerful.

Across Studies 1-3, prosocial norm violators got less power than prosocial norm followers. Studies 2 and 3 both showed that prosocial norm violators were perceived as less communal, and thus got less power. In Study 3, prosocial norm violators were perceived as less powerful, which also reduced power conferral.

In sum, in Studies 1-3, we found that while prosocial norm violation signaled the violator's agency, it did not signal the violator's power or communality. Instead it had negative effects on these perceptions, which led people to give less power to the violator.

Chapter 5: Study 4

Many of the behaviors we studied, such as helping a fellow student with a pencil without lead or distributing helpful information about a town hall meeting, were small acts of kindness. People may think it is not justified to violate a norm for a small prosocial impact. If the prosocial impact is higher, the negative effect of violation on perceived communality might be mitigated. That would in turn mitigate the negative effects on power perception and power conferral. In Study 4, we varied the size of the prosocial impact to test these predictions.

Method

Participants. 1415 participants (164 from the Rady Behavioral Lab and 1251 from Amazon Mechanical Turk) participated in this study (48.10% women, Age M = 33.55, SD = 11.25). Based on the effect sizes of the norm violation manipulation in the prosocial condition in study 3 (power perception: d = -0.49; power conferral: d = -0.58), we conducted a power analysis. We were interested in testing whether the size of the prosocial impact moderates the effect of norm violation. If the negative effect of norm violation on power perception as found in Study 3 was reduced by 30% when the prosocial impact is higher, the required sample size to achieve 80% power of detecting the moderation is 1400 (Simonhon, 2014). Thus, the current sample was well-powered to detect any sizable reduction (>= 30%) of norm violation effect on power perception or power conferral.

Design. Study 3 had a 2 (Follow norm/violate Norm) x 2 (Baseline prosocial impact/ high prosocial impact) between-subject design. We used the same norm violation

manipulation as Study 3, using only the prosocial condition in which Alex advocated for a student mental health organization.

Prosocial impact manipulation. To manipulate the size of the prosocial impact, we added a paragraph before the scenario, to provide context that either highlighted the importance of Alex's advocacy or not. In the high prosocial impact condition, participants read that:

> Recently, a student committed suicide on campus at his school. There were also several suicide attempts reported to campus authorities in the last three months. The whole campus is grappling with students' mental health issues.

In the baseline impact condition, participants read that:

> Recently, a student dormitory was broken into at his school and many students' valuables were stolen. There were also several other thefts reported to campus authorities in the last three months. The whole campus is grappling with security issues.

Pretest. We pretested the manipulations with 406 participants from Amazon Mechanical Turk (48.10% women, Age M = 33.55, SD = 11.25), using the same manipulation check measures in Study 3 for perceived norm violation and perceived social impact. Participants perceived stronger norm violation in the violate norm condition than the follow norm condition, $F(1,402) = 950.28$, $p < .001$, $\hat{\eta}^2_G$=.703 (Table 1). The prosocial impact manipulation did not affect norm violation perception, $F(1,402) = 1.10$, $p = .296$, $\hat{\eta}^2_G$=.003; nor was there an interaction, $F(1,402) = 1.15$, $p = .285$, $\hat{\eta}^2_G$= .003.

The prosocial impact manipulation was also successful. Participants perceived net social impact as more positive in the high impact condition (M = 3.84, SD = 2.12) than the baseline condition (M = 3.34, SD = 2.13), d = 0.24 [0.04, 0.43], $F(1,402) = 5.89$, $p = .016$, $\hat{\eta}^2_G = .014$. And participants still perceived violating a norm as producing a less positive social impact than following norm, $F(1,402) = 9.85$, $p = .002$, $\hat{\eta}^2_G = .024$ (Table 2). There was no interaction, $F(1,402) = 0.32$, $p = .573$, $\hat{\eta}^2_G = .001$. There were no interactions when we examined the four social impact manipulation check questions separately neither. Participants perceived the target's behavior in the high prosocial impact condition as more beneficial than the baseline prosocial impact condition, to both others and an important cause (Table 12). But there was no difference between the self-interested and the prosocial behavior in perceived harm (Table 12). In addition, consistent with Study 2, people perceived violating norm as less beneficial for others than following norm, but there was no effect of violation on how beneficial it was for an important cause, or how harmful it was for both others and cause (Table 8).

Table 12. Effects of the Social Impact Manipulation on Perceived Benefit and Harm in Study 4 Pretest

	Baseline Impact M (SD)	High Impact M (SD)	Effect Size d [95% CI]
Benefit Others	5.50 (1.16)	5.80 (1.14)	-0.26 [-0.46, -0.07]
Benefit Cause	2.09 (1.38)	1.97 (1.42)	-0.25 [-0.44, -0.05]
Harm Others	5.62 (1.17)	5.91 (1.15)	0.09 [-0.10, 0.29]
Harm Cause	2.35 (1.64)	2.07 (1.46)	0.18 [-0.02, 0.38]

Dependent measures. We used the same dependent measures as Study 3 (power perception (α = 0.86), power conferral (α = 0.93), potential mediators (perceived agency: α = 0.66, perceived communality: α = 0.80), liking, familiarity with events with formal dress code).

Individual cultural orientation. Stamkou et al. (2018) showed that country-level collectivism/individualism moderated the effects of selfish norm violation on power perception and power conferral: both effects were more negative in collective cultures than individualistic cultures. To explore whether individual-level collectivism/individualism moderates the effects of prosocial norm violation, we measured participants' vertical and horizontal individualism and collectivism cultural orientation using Trandis and Gelfand's 16-item scale (1998), before demographic questions. These cultural orientations have been shown to relate to different conceptualizations of power at both individual and country level (Torelli & Shavitt, 2010). Example items are: *competition is the law of nature* (vertical individualism, α = 0.73)*, I'd rather depend on myself than others* (horizontal individualism, α = 0.68), *it is important to me that I respect the decisions made by my group* (vertical collectivism, α = 0.73), *I feel good when I cooperate with others* (horizontal collectivism, α = 0.79). All items were rated on 7-point scales labeled with Disagree strongly, Disagree, Disagree a little, Neither agree nor disagree, Agree a little, Agree, Agree strongly.

Results

Participants reported to be fairly familiar with situations involving formal dress codes (M = 5.27, SD = 1.66).

Power perception. Participants perceived the target as less powerful in the violate norm condition than in the follow norm condition, $F(1,1411) = 9.04$, $p = .003$, $\hat{\eta}^2_G = .006$ (Table 3). The prosocial impact manipulation did not affect power perception, $F(1,1411) = 2.24$, $p = .135$, $\hat{\eta}^2_G = .002$. The interaction was not significant, $F(1,1411) = 3.22$, $p = .073$, $\hat{\eta}^2_G = .002$, although directionally the negative effect of norm violation was reduced when prosocial impact was high. In the baseline impact condition, participants perceived the norm-violating target as less powerful ($M = 4.60$, $SD = 0.98$) than the norm-following target ($M = 4.83$, $SD = 0.80$), $d = -0.26$ [-0.40, -0.11], $t(704) = 3.41$, $p = .001$. In the high impact condition, norm violation did not have a significant effect on power perception ($M_{Follow} = 4.82$, $SD_{Follow} = 0.88$; $M_{Violate} = 4.76$, $SD_{Violate} = 0.93$), $d = -0.06$ [-0.21, 0.08], $t(707) = 0.85$, $p = .393$ (Figure 3).

Power conferral. Participants gave more power to the norm-following target than the norm-violating target, $F(1,1408) = 32.52$, $p < .001$, $\hat{\eta}^2_G = .023$ (Table 3). They also gave more power to the target in the high prosocial impact condition ($M = 5.26$, $SD = 1.17$) than the baseline condition ($M = 4.89$, $SD = 1.24$), $F(1,1408) = 34.07$, $p < .001$, $\hat{\eta}^2_G = .024$). Moreover, there was a significant interaction, $F(1,1408) = 4.32$, $p = .038$, $\hat{\eta}^2_G = .003$ (Figure 3). The negative effect of norm violation on power conferral was reduced in the high impact condition ($M_{Follow} = 5.38$, $SD_{Follow} = 1.01$; $M_{Violate} = 5.15$, $SD_{Violate} = 1.31$), $d = -0.20$ [-0.34, -0.05], $t(705) = 2.61$, $p = .009$, as compared to the baseline impact condition ($M_{Follow} = 5.14$, $SD_{Follow} = 1.00$; $M_{Violate} = 4.64$, $SD_{Violate} = 1.39$), $d = -0.41$ [-0.56, -0.26], $t(703) = 5.40$, $p < .001$.

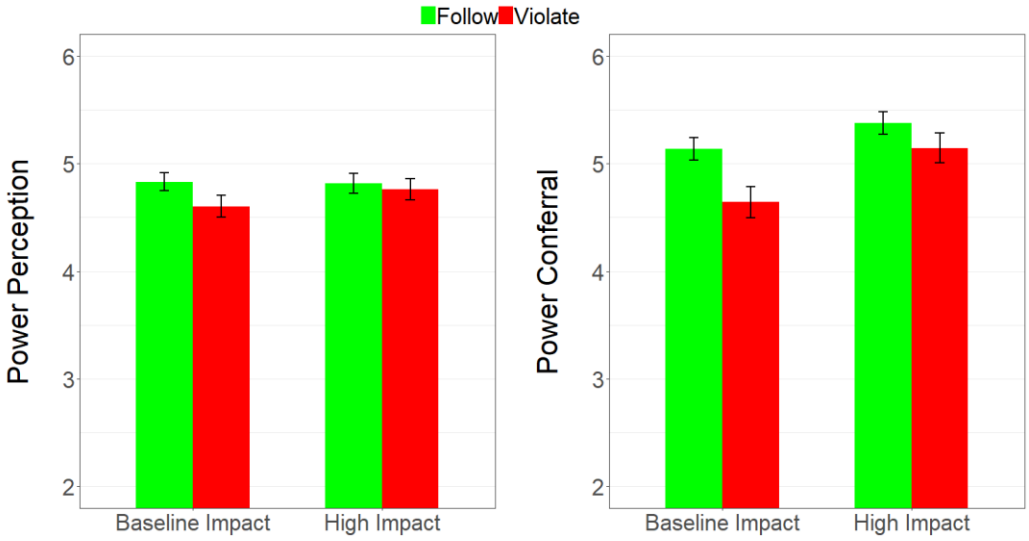

Figure 3. Power Perception and Power Conferral Results in Study 4
Notes. Error Bars Reflect 95% Confidence Intervals.

Perceived Agency. Participants perceived the norm violator as more agentic than the norm follower, $F(1,1409) = 126.11$, $p < .001$, $\hat{\eta}_G^2 = .082$ (Table 3). Size of the prosocial impact did not affect perceived agency, $F(1,1409) = 0.58$, $p = .448$, $\hat{\eta}_G^2 = .000$. There was no interaction, $F(1,1409) = 0.14$, $p = .704$, $\hat{\eta}_G^2 = .000$.

Perceived Communality. Participants perceived the norm violator as less communal than the norm follower, $F(1,1409) = 84.78$, $p < .001$, $\hat{\eta}_G^2 = .057$ (Table 3). They also perceived the target as more communal in the high impact condition (M = 5.32, SD = 0.95) than in the baseline condition (M = 5.15, SD = 0.90, $F(1,1409) = 12.85$, $p < .001$, $\hat{\eta}_G^2 = .009$). The interaction was not significant, $F(1,1409) = 3.16$, $p = .076$, $\hat{\eta}_G^2 = .002$,

although directionally the negative communal of norm violators' communality was mitigated in the high prosocial impact condition (M_{Follow} = 5.50, SD_{Follow} = 0.87; $M_{Violate}$ = 5.14, $SD_{Violate}$ = 0.99), d = -0.38 [-0.23, -0.53], $t(705) = 2.61$, $p = .009$, compared to the baseline condition, (M_{Follow} = 5.41, SD_{Follow} = 0.76; $M_{Violate}$ = 4.89, $SD_{Violate}$ = 0.95), d = -0.61 [-0.76, -0.46], $t(703) = 8.08$, $p < .001$.

Liking. Norm violation ($F(1,1411) = 40.96$, $p < .001$, $\hat{\eta}_G^2 = .028$) and size of prosocial impact ($F(1,1411) = 26.11$, $p < .001$, $\hat{\eta}_G^2 = .018$) both had significant main effects on liking. Moreover, there was a significant interaction, $F(1,1411) = 4.44$, $p = .035$, $\hat{\eta}_G^2 = .003$. Participants always liked the norm violator less than the norm follower. But this effects was weaker in the high prosocial impact condition (M_{Follow} = 5.39, SD_{Follow} = 1.20; $M_{Violate}$ = 5.09, $SD_{Violate}$ = 1.38), $t(707) = 3.04$, $p = .002$, d = -0.23 [-0.38, -0.08], as compared to the baseline impact condition (M_{Follow} = 5.18, SD_{Follow} = 1.12; $M_{Violate}$ = 4.60, $SD_{Violate}$ = 1.44), $t(704) = 6.00$, $p < .001$, d = -0.45 [-0.60, -0.30].

Mediation analysis for power perception. We ran a moderated mediation model for power perception with the same setup as Study 3. Estimates are reported in Table 13. We did not find any moderated mediation. Consistent with Study 3, we found indirect effect of perceived agency and perceived communality in opposite directions. Prosocial norm violators looked more powerful because they looked more agentic, but less powerful because they looked less communal. Size of the prosocial impact did not significantly moderate these

indirect effects, although directionally the indirect effect of perceived communality was reduced in the high prosocial impact condition.

Mediation analysis for power conferral. We also ran a moderated mediation model for power conferral with the same setup as Study 3 (Table 13). Again, moderated mediations were not significant. Consistent with Study 3, power perception and perceived communality both had negative indirect effects: the norm violator was perceived less powerful and less communal, and thus got less power. The indirect effect of perceived communality was stronger than the indirect effect of power perception. Directionally, both indirect effects were reduced in the high prosocial impact condition.

Table 13. Study 4 Mediation Results

		Power perception			Power Conferral	
Direct Effect		-.08[-.17, -.01]			-.01[-.10, .09]	
Indirect effects	Moderated Mediation Index	High Impact Estimate	Baseline Estimate	Moderated Mediation Index	High Impact Estimate	Baseline Estimate
Agency	-.01[-.05, .03]	**.11 [.07, .16]**	**.12 [.08, .17]**	-.00[-.01, .01]	-.00 [-.03, .03]	-.00[-.03, .03]
Communality	.07[-.00, .15]	**-.14 [-.15, -.00]**	**-.21 [-.27, -.15]**	.12[-.01, .15]	**-.23[-.33, -.14]**	**-.35[-.44, -.26]**
Power Perception	-	-	-	.08[-.00, .16]	-.02[-.08, .03]	**-.10[-.16, -.04]**

Note. Significant indirect effects are in boldface.

Exploratory analyses with individual-level cultural orientation. To explore whether individual's cultural orientations moderated the effects of prosocial norm violation, we ran eight regression models. Each model tested the interaction between norm violation, prosocial impact and one cultural orientation, with either power perception or power conferral as the outcome variable. We report the descriptives of each cultural orientation in Table 14. We standardized cultural orientation values in all regression analyses.

Table 14. Cultural Orientation Descriptives

Cultural Orientation	Mean (SD)
Vertical individualism	4.07 (1.15)
Horizontal individualism	5.49 (0.88)
Vertical collectivism	5.04 (1.04)
Horizontal collectivism	5.20 (0.92)

Horizontal individualism (Table 16), vertical collectivism (Table 15) and horizontal collectivism (Table 18) all had significant positive main effects on power perception. Vertical individualism did not have any significant effect on power perception (Table 15). Since the target's behavior is prosocial in all conditions, the above main effects suggested that cultural orientations affected how people associate being prosocial with being powerful. People who were more identified with vertical individualism, which emphasizes competition and getting ahead of others (Triandis & Gelfand, 1998), did not perceive being prosocial as a sign of high power. In contrast, people who are more identified with the other three cultural orientations perceived being prosocial as a sign of high power. None of the four cultural orientations moderated the effect of norm violation or prosocial impact, nor were there any three-way interactions.

Table 15. Power Perception Predicted by Vertical Individualism, Norm Violation, and Prosocial Impact

Predictor	β	95% CI	$t(1407)$	p
Intercept	4.83	[4.74, 4.93]	102.28	< .001
Prosocial Impact	-0.02	[−0.15, 0.11]	-0.29	.774
Norm Violation	-0.22	[−0.35, −0.09]	-3.30	.001
VI	-0.08	[−0.17, 0.01]	-1.76	.079
Prosocial Impact × Norm Violation	0.16	[−0.02, 0.35]	1.71	.087
Prosocial Impact × VI	-0.07	[−0.20, 0.06]	-1.08	.280
Norm Violation × VI	-0.11	[−0.24, 0.02]	-1.69	.092
Prosocial Impact × Norm Violation × VI	0.17	[−0.02, 0.35]	1.77	.077

Note. VI = vertical individualism.

Table 16. Power Perception Predicted by Horizontal Individualism, Norm Violation, and Prosocial Impact

Predictor	β	95% CI	$t(1407)$	p
Intercept	4.83	[4.73, 4.92]	101.47	< .001
Prosocial Impact	-0.01	[−0.14, 0.12]	-0.12	.902
Norm Violation	-0.23	[−0.36, −0.10]	-3.38	.001
HI	0.12	[0.02, 0.21]	2.38	.017
Prosocial Impact × Norm Violation	0.17	[−0.02, 0.36]	1.77	.076
Prosocial Impact × HI	-0.04	[−0.18, 0.09]	-0.60	.549
Norm Violation × HI	0.02	[−0.12, 0.15]	0.24	.810
Prosocial Impact × Norm Violation × HI	-0.07	[−0.26, 0.12]	-0.74	.459

Note. HI = horizontal individualism.

Table 17. Power Perception Predicted by Vertical Collectivism, Norm Violation, and Prosocial Impact

Predictor	β	95% CI	$t(1407)$	p
Intercept	4.84	[4.75, 4.94]	101.39	< .001
Prosocial Impact	-0.03	[−0.16, 0.10]	-0.44	.660
Norm Violation	-0.24	[−0.37, −0.11]	-3.56	< .001
VC	0.13	[0.04, 0.22]	2.93	.003
Prosocial Impact × Norm Violation	0.18	[−0.01, 0.36]	1.86	.063
Prosocial Impact × VC	-0.09	[−0.22, 0.04]	-1.32	.187
Norm Violation × VC	-0.09	[−0.21, 0.04]	-1.29	.197
Prosocial Impact × Norm Violation × VC	0.14	[−0.05, 0.33]	1.45	.148

Note. VC = vertical collectivism.

Table 18. Power Perception Predicted by Horizontal Collectivism, Norm Violation, and Prosocial Impact

Predictor	β	95% CI	$t(1407)$	p
Intercept	4.83	[4.74, 4.92]	102.41	< .001
Prosocial Impact	-0.02	[−0.15, 0.11]	-0.27	.790
Norm Violation	-0.22	[−0.36, −0.09]	-3.37	.001
HC	0.18	[0.08, 0.27]	3.69	< .001
Prosocial Impact × Norm Violation	0.17	[−0.02, 0.35]	1.79	.073
Prosocial Impact × HC	-0.06	[−0.19, 0.08]	-0.82	.414
Norm Violation × HC	-0.09	[−0.22, 0.05]	-1.29	.199
Prosocial Impact × Norm Violation × HC	0.14	[−0.05, 0.32]	1.47	.143

Note. HC = horizontal collectivism.

Horizontal individualism (Table 19), vertical collectivism (Table 21), and horizontal collectivism (Table 22) also had significant positive main effects on power conferral. Thus, people who were more identified with these three cultural orientations not only perceived being prosocial as more powerful, they also gave more power to the prosocial person. None of these three cultural orientations interacted with norm violation or prosocial impact, nor were there any three-way interactions.

There was a significant three-way interaction between vertical individualism, norm violation and prosocial impact (Table 19). To unpack it, we performed a median split on vertical individualism and tested the effect of norm violation and prosocial impact on power conferral in each group. Among participants who had above-the-medium vertical individualism (n = 681), norm violation ($F(1,677) = 15.50$, $p < .001$, $\hat{\eta}_G^2 = .022$) and prosocial impact ($F(1,677) = 9.18$, $p = .003$, $\hat{\eta}_G^2 = .013$) both had a significant main effect, qualified by a significant interaction, $F(1,677) = 13.91,\ p < .001$, $\hat{\eta}_G^2 = .020$. Following up

on this interaction, we found that participants with high vertical individualism gave less power to the prosocial violator (M = 4.57, SD = 1.44) than the norm follower (M = 5.26, SD = 0.90) in the baseline impact condition, $t(354) = 5.37$, $p < .001$, d = -0.57 [-0.79, -0.36]. But this negative effect was eliminated in the high prosocial impact condition (M_{Follow} = 5.19, SD_{Follow} = 1.07; $M_{Violate}$ = 5.19, $SD_{Violate}$ = 1.30), $t(323) = 0.02$, $p = .983$, d = 0.00 [-0.22, 0.22]. Among participants who had below-the-medium vertical individualism (n = 610), norm violation and prosocial impact both had a significant main effect on power conferral, but with no interaction, $F(1,604) = 1.04$, $p = .309$, $\hat{\eta}_G^2 = .002$. Participants with low vertical individualism gave less power to norm violators (M = 5.00, SD = 1.34) than norm followers (M = 5.34, SD = 1.01), $F(1,604) = 14.14$, $p < .001$, $\hat{\eta}_G^2 = .023$. They gave more power to the target in the high prosocial impact condition (M = 5.39, SD = 1.15) than in the baseline condition (M = 4.93, SD = 1.20), $F(1,604) = 23.59$, $p < .001$, $\hat{\eta}_G^2 = .038$) (see Figure 4).

Table 12. Power Conferral Predicted by Vertical Individualism, Norm Violation, and Prosocial Impact

Table 19. Power Conferral Predicted by Vertical Individualism, Norm Violation, and Prosocial Impact

Predictor	β	95% CI	$t(1404)$	p
Intercept	5.13	[5.01, 5.26]	81.26	< .001
Prosocial Impact	0.24	[0.06, 0.41]	2.66	.008
Norm Violation	-0.49	[−0.66, −0.31]	-5.45	< .001
VI	0.11	[−0.01, 0.24]	1.82	.069
Prosocial Impact × Norm Violation	0.26	[0.02, 0.51]	2.09	.037
Prosocial Impact × VI	-0.28	[−0.45, −0.10]	-3.12	.002
Norm Violation × VI	-0.18	[−0.36, 0.00]	-2.02	.044
Prosocial Impact × Norm Violation × VI	0.40	[0.15, 0.65]	3.17	.002

Note. VI = vertical individualism.

Table 20. Power Conferral Predicted by Horizontal Individualism, Norm Violation, and Prosocial Impact.

Predictor	β	95% CI	$t(1404)$	p
Intercept	5.13	[5.01, 5.26]	81.48	< .001
Prosocial Impact	0.25	[0.07, 0.42]	2.76	.006
Norm Violation	-0.49	[−0.67, −0.32]	-5.53	< .001
HI	0.15	[0.02, 0.27]	2.26	.024
Prosocial Impact × Norm Violation	0.26	[0.02, 0.51]	2.10	.036
Prosocial Impact × HI	-0.06	[−0.24, 0.12]	-0.67	.506
Norm Violation × HI	0.07	[−0.11, 0.25]	0.77	.441
Prosocial Impact × Norm Violation × HI	-0.03	[−0.28, 0.21]	-0.27	.788

Note. HI = horizontal individualism.

Table 21. Power Conferral Predicted by Vertical Collectivism, Norm Violation, and Prosocial Impact

Predictor	β	95% CI	$t(1404)$	p
Intercept	5.17	[5.04, 5.29]	82.74	< .001
Prosocial Impact	0.19	[0.02, 0.37]	2.18	.029
Norm Violation	-0.52	[−0.69, −0.34]	-5.86	< .001
VC	0.31	[0.20, 0.43]	5.34	< .001
Prosocial Impact × Norm Violation	0.29	[0.04, 0.53]	2.30	.021
Prosocial Impact × VC	-0.07	[−0.24, 0.10]	-0.86	.391
Norm Violation × VC	-0.17	[−0.33, 0.00]	-1.93	.054
Prosocial Impact × Norm Violation × VC	0.12	[−0.12, 0.37]	0.98	.325

Note. VC = vertical collectivism.

Table 22. Power Conferral Predicted by Horizontal Collectivism, Norm Violation, and Prosocial Impact

Predictor	β	95% CI	$t(1404)$	p
Intercept	5.14	[5.02, 5.26]	84.48	< .001
Prosocial Impact	0.23	[0.06, 0.40]	2.65	.008
Norm Violation	-0.48	[−0.65, −0.31]	-5.56	< .001
HC	0.38	[0.26, 0.50]	6.07	< .001
Prosocial Impact × Norm Violation	0.26	[0.02, 0.49]	2.11	.035
Prosocial Impact × HC	-0.07	[−0.24, 0.10]	-0.77	.441
Norm Violation × HC	-0.06	[−0.23, 0.11]	-0.70	.481
Prosocial Impact × Norm Violation × HC	0.10	[−0.14, 0.34]	0.81	.416

Note. HC = horizontal collectivism.

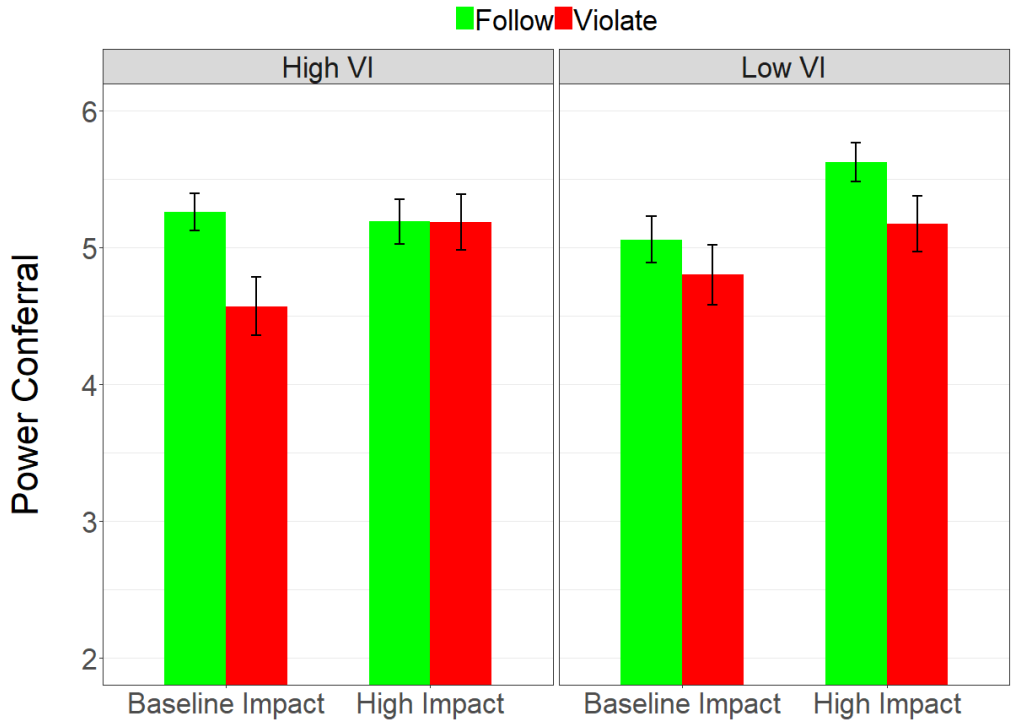

Figure 4. Power Conferral Results for Participants with High Vertical Individualism (above median) and Lower Vertical Individualism (below median) in Study 4
Notes. Error Bars Reflect 95% Confidence Intervals.

In sum, we found some preliminary evidence for vertical individualism moderating the effect of prosocial norm violation on power conferral: people with low vertical individualism gave less power to the prosocial norm violator regardless of the size of the prosocial impact; people with high vertical individualism gave less power to the violator when the prosocial impact is low, but they gave the same amount power to the violator and the norm follower when the prosocial impact is high. This finding is consistent with previous research (Stamkou, et al., 2018) , which showed that people in individualistic cultures reacted more positively to

selfish norm violations than people in collective cultures. However, we never found any positive effect of prosocial norm violation, even among participants with high vertical individualism.

Discussion

Study 4 tested whether a bigger prosocial impact would mitigate the negative effect of prosocial norm violation on perceived communality, and as a result improve power perception and power conferral. Directionally, the negative effects of prosocial norm violation on perceived communality, power perception, and power conferral were reduced when prosocial impact was increased, although the moderation was only statistically significant for power conferral. Exploratory analysis with individual-level cultural orientation suggested that people with higher vertical individualism in particular were more tolerant of high-impact prosocial norm violations. While Study 4 results suggest that people have less negative social reactions to violations with higher prosocial impact, it did not produce positive effects on power or communality perception.

Chapter 6: Supplementary studies

Study P1

We used a vignette from van Kleef et al. (2012, Study 1) to test how prosocial vs. selfish norm violation affect power perception and power conferral. Participants imagined they witnessed a colleague's behavior during a company outing, which is either violated norm or not.

In addition to the effect of norm violation and social impact, we were also interested in how target gender may affect reactions to the prosocial and selfish norm violations. Research on gender stereotypes has shown that it is less acceptable for women than men to be low on communality (self-centered, cold towards others) or too high on agency (aggressive, demanding) (Prentice & Carranza, 2002; Rudman, et al., 2012). The gender proscription against agentic and selfish women suggests that women would be punished more for norm violation, especially for selfish norm violations. We manipulated target gender in Study P1, to explore target gender as a moderator of norm violation effects.

Study 2 had a 2 (Norm Violation: violate norm vs. follow norm) x 2(Social Impact: prosocial vs. selfish) x 2 (Target Gender: male target vs. female target) between-subjects design.

Participants

1587 participants participated in this study online through Amazon Mechanical Turk (46.6% women, Age M = 36.73, SD = 12.05). To determine the sample size, we used the effect size of the interaction effect between the norm violation manipulation and the social

impact manipulation from Study 1 of van Kleef (2012), the source of the vignette. We were also interested in examining the moderation of target gender but did not have precise predictions about its size. We would need to have at least 8 times the original sample size to detect a 50% change in the original effect size (Giner-Sorolla, 2018; Simonsohn, 2015), which would be 1022 participants. We over-sampled because the effect size estimate might be inflated due to the small sample size of the original study, and the uncertainty in the moderation effect size.

213 participants failed one or more of the three attention check questions (13.4% of the total sample). We ran a logistic regression for each attention check question to test if any of the three manipulated variables or any interactions between them affected the attention check result. 87 participants failed the attention check about whether it was allowed to adjust the seat. Participants in the norm violation condition were more likely to fail this attention check (53 were in the norm violation condition, and 34 were in the follow norm condition), $F(1,1579) = 4.43$, $MSE = 0.05$, $p = .036$, $\hat{\eta}_G^2 = .003$. There were no other significant effects, *ps* > .073. 121 participants failed the attention check for the social impact manipulation (how adjusting the seat affected the legroom of the individual sitting behind the target). More participants in the prosocial condition failed this attention check than the selfish condition (87 were in the prosocial condition, and 34 were in the selfish condition). No other effects were significant, *ps* > .136. 86 participants failed the attention check for target gender: More (29) were in the norm violation condition, than the follow norm condition (57),

$F(1,1579) = 9.64$, $MSE = 0.05$, $p = .002$, $\hat{\eta}_G^2 = .006$. No other effects were significant, *ps* > .115. After excluding participants who failed on or more attention checks, 1374 participants remained in the analyses reported below (48.2% women, Age *M* = 37.68, *SD* = 12.19). Not excluding these participants produced qualitatively same patterns of results.

Method

Norm violation manipulation. Participants read that the target (John or Jane) was on a bus during a company organized outing. The bus was full after everyone boarded. In the violate norm condition, the bus driver announced, "Please don't adjust the positions of your seats. They may become stuck when adjusted further up or down." In the follow norm condition, the bus driver announced, "Please don't eat or drink on the bus." A few minutes after the announcement, the target adjusted his or her seat.

Social consequence manipulation. In the prosocial condition, the target adjusted the seat forward to the upright position, and gave the colleague sitting behind more legroom. In the selfish condition, the target adjusted the seat backward to lie down, and reduced the legroom of the colleague sitting behind.

Power perception measure. We measured perception of the target's power with the Sense of Power Scale (Anderson, John, & Keltner, 2012) (α = 0.92), rated on a 7-point scale labeled Disagree Strongly-1 to Agree Strongly -7. Examples of the questions are: "John has a great deal of power" and "John's ideas and opinions are often ignored" (reverse-coded).

Power conferral measure. We told participants that target is nominated to lead a new committee in the company. To measure how much participants want to give power to the

target, we asked participants five questions ($\alpha = 0.93$), including how likely they would support John/Jane to be the committee leader, how likely John would be an effective leader, how much power John should have in the committee, how much influence John should have over the operations of the committee, and how likely they would volunteer for the committee, if John asked them to. Participants responded on seven-point ratings scales (1 = Very unlikely, 7 = Very likely).

Perceived agency and perceived communality. Participants rated how much they perceive the target as agentic (independent, competitive, assertive, $\alpha = 0.74$), and communal (warm, cooperative, friendly, $\alpha = 0.93$), on 7-point scales (1 = Not at all, 7 = Very much). We also included some filler items in the trait ratings (dominating, intimidating, naive, weak, emotional, arrogant).

Attention Checks. Participants answered three attention check questions: if it was allowed to adjust the position of the bus seat (Yes, No, I don't know), if the person who adjusted the seat position was male or female(Male, Female, I don't know), and whether the target increased, decreased or did not affect the legroom of the colleague sitting behind.

Manipulation check. Participants rated how appropriate it was to adjust one's seat in this scenario on a 7-point scale (1= Very inappropriate, 7 = Very appropriate).

Perceptions of the norm. We also asked participants how reasonable they thought it was for the bus driver to ask passengers to not adjust their seat position in the norm violation condition on a 7-point scale (1= Not reasonable at all, 7 = Very reasonable). Following up the rating, we also asked participants to briefly explain why they thought it was or was not

reasonable, in a free-response question. Then, we asked participants what percentage of people on the bus adjusted their seats forward, backward, or did not adjust their seats, on three separate sliding scales ranging from 0 to 100%. The three scales automatically adjust to add up to 100%. Participants also reported if they were on the bus, would they adjust their seat forward, backward, or not adjust it.

At the end, we measured demographic variables. Lastly, we probed their perceived purpose of the study as well as their suspicions.

Results

Target gender did not affect power perception or power conferral of the target, nor did it interact with the other manipulated variables. Thus, we collapsed across the target gender conditions in the analyses reported below. We report all the descriptive statistics and test results of simple main effects in Table 23.

Manipulation check. Participants rated violating the norm as less appropriate than following the norm, $F(1,1366) = 788.45$, $MSE = 2.03$, $p < .001$, $\hat{\eta}_G^2 = .366$, confirming the success of the norm violatio manipulation. Social impact of the behavior also had a main effect on perceived appropriateness of the behavior, prosocial behavior was considered as more appropriate than selfish behavior, $F(1,1366) = 853.95$, $MSE = 2.03$, $p < .001$, $\hat{\eta}_G^2 = .385$. Moreover, there was a significant interaction between norm violation and behavior social impact, $F(1,1366) = 86.66$, $MSE = 2.03$, $p < .001$, $\hat{\eta}_G^2 = .060$. The effect of the norm violation manipulation was stronger in the prosocial condition than in the selfish.

Power perception. There was a significant main effect of norm violation, $F(1,1370) = 21.81$, $MSE = 1.12$, $p < .001$, $\hat{\eta}_G^2 = .016$, as well as a significant main effect of behavior social impact, $F(1,1370) = 50.14$, $MSE = 1.12$, $p < .001$, $\hat{\eta}_G^2 = .035$. These main effects were qualified by an interaction, $F(1,1370) = 25.57$, $MSE = 1.12$, $p < .001$, $\hat{\eta}_G^2 = .018$. Contrary to our hypothesis that norm violations would be perceived as more powerful, in the prosocial condition, norm violation did not affect power perception. In the selfish condition, norm violators were perceived as less powerful than non-violators.

Power conferral. There was a significant main effect of norm violation, $F(1,1370) = 216.40$, $MSE = 1.44$, $p < .001$, $\hat{\eta}_G^2 = .136$, as well as a significant main effect of behavior social impact, $F(1,1370) = 478.62$, $MSE = 1.44$, $p < .001$, $\hat{\eta}_G^2 = .259$. These main effects were qualified by an interaction, $F(1,1370) = 4.63$, $MSE = 1.44$, $p = .032$, $\hat{\eta}_G^2 = .003$.Participants were less willing to give power to the norm violator than the target who did not violate norms for both prosocial and selfish violations. But this effect was stronger in the selfish condition than in the prosocial condition.

Perceived Agency. We found a significant main effect of norm violation, $F(1,1370) = 39.31$, $MSE = 1.69$, $p < .001$, $\hat{\eta}_G^2 = .028$and a significant main effect of behavior social impact on perceived agency, $F(1,1370) = 71.89$, $MSE = 1.69$, $p < .001$, $\hat{\eta}_G^2 = .050$. These main effects were qualified by an interaction, $F(1,1370) = 78.82$, $MSE = 1.69$, $p < .001$, $\hat{\eta}_G^2 = .054$. Consistent with our hypothesis, participants perceive the

prosocial violator as more agentic than the prosocial target who did not violate norm. However, selfish violation did not influence perceived agency.

Perceived Communality. We found a significant main effect of norm violation, $F(1,1370) = 434.12$, $MSE = 1.56$, $p < .001$, $\hat{\eta}_G^2 = .241$and a significant main effect of behavior social impact on perceived communality, $F(1,1370) = 1{,}143.27$, $MSE = 1.56$, $p < .001$, $\hat{\eta}_G^2 = .455$. These main effects were qualified by an interaction, $F(1,1370) = 22.62$, $MSE = 1.56$, $p < .001$, $\hat{\eta}_G^2 = .016$. Participants perceived norm violators as less communal for both prosocial violation and selfish violation. This effect is larger for prosocial violation than for selfish violation.

Mediation Analysis for power perception. We tested the moderated mediation effects of perceived agency and perceived communality on power perception with social impact as the moderator for norm violation effects on power perception with the same methods as Study 3. Table 24 shows the estimates. We found significant moderation of the indirect effects of perceived agency and perceived communality. We found support for the hypothesized indirect effect only in the prosocial condition: participants perceived the prosocial violator as more agentic, and thus more powerful. In the selfish condition, because norm violation did not affect perceived agency, there was no indirect effect of perceived agency. We also found that perceived communality had negative indirect effects in both the prosocial and the selfish condition: participants perceived the norm violators as less

communal, and in turn less powerful. Surprisingly this negative effect was stronger in the prosocial condition.

Mediation Analysis of power conferral. We tested moderated mediation of perceived agency, perceived communality, and power perception as mediators of power conferral with social impact as the moderator with the same methods as Study 3. We found significant moderation only for the indirect effect of power perception. We predicted power perception would have a positive indirect effect on power conferral in both the prosocial and the selfish condition. However, because prosocial norm violation did not affect power perception, power perception did not have an indirect effect on power conferral in the prosocial condition. Because participants perceived the selfish norm violators as less powerful than the selfish control target, there was a negative indirect effect of power perception on power conferral in the selfish condition. For perceived communality, we found that participants perceived norm violators as less communal, and thus were less willing to give them power in both the selfish and the prosocial conditions. To sum up, participants were more willing to give power to those who look more communal and more powerful. The prosocial violator was perceived as less communal and thus given less power. The selfish violator was perceived as less communal and less powerful, which also led to lower power conferral.

Table 23. Summary of Results in Study P1

Variable	Social impact	Follow Norm M (SD)	Violate Norm M (SD)	Effect Size *d* [95% CI]	t test	p
Appropriate (Norm violation manipulation check)	Prosocial	5.95 (1.16)	3.09 (1.79)	-1.90 [-2.11, -1.69]	$t(664) = -24.50$	$< .001$
	Selfish	2.97 (1.66)	1.54 (0.97)	-1.06 [-1.23, -0.90]	$t(706) = 14.12$	$< .001$
Power perception	Prosocial	4.71 (0.92)	4.75 (1.03)	0.04 [-0.11, 0.19]	$t(664) = 0.49$	$.625$
	Selfish	4.61 (1.03)	4.06 (1.22)	-0.48 [-0.63, -0.33]	$t(706) = -6.38$	$< .001$
Power conferral	Prosocial	5.1 (1.05)	4.31 (1.33)	-0.66 [-0.82, -0.50]	$t(664) = -8.47$	$< .001$
	Selfish	3.82 (1.24)	2.76 (1.15)	-0.89 [-1.05, -0.73]	$t(706) = -11.81$	$< .001$
Agentic	Prosocial	3.55 (1.27)	4.62 (1.32)	0.83 [0.66, 0.99]	$t(664) = 10.67$	$< .001$
	Selfish	4.78 (1.15)	4.61 (1.42)	-0.13 [-0.28, 0.01]	$t(706) = -1.77$	$.074$
Communal	Prosocial	5.61 (1.22)	3.92 (1.38)	-1.30 [-1.48, -1.12]	$t(664) = -16.79$	$< .001$
	Selfish	3.01 (1.32)	1.95 (1.05)	0.89 [-1.05, -0.73]	$t(706) = -11.80$	$< .001$

Table 24. Study P1 Mediation Results

	Power perception			Power Conferral		
Direct Effect	-.14[-.25, -.03]			-.17[-.28, - .07]		
Indirect Effect	Moderated Mediation Index	Selfish Estimate	Prosocial Estimate	Moderated Mediation Index	Selfish Estimate	Prosocial Estimate
Agency	.40[.30, .51]	-.06 [-.12, .01]	**.35 [.27, .43]**	.01[-.05, .06]	-.00 [-.01, .01]	.02[-.04,.05]
Communality	-.12 [-.18, -.07]	**-.20 [-.26, -.16]**	**-.33 [-.40, -.26]**	-.30 [-.43, .17]	**-.50[-.60, -.40]**	**-.80 [-.92, -.69]**
Power Perception		-	-	.27[.16, .40]	**-.26[-.34, -.17]**	**.02[-.05, .09]**

Note. Significant indirect effects are in boldface.

Other measures. In the norm violation condition, we asked participants how reasonable it was for the bus driver to ask passengers to not adjust their seat position. Participants rated the rule as relatively reasonable (M = 5.46, SD = 1.70). Results of other measures are reported in Table 25 and Table 26. We did not have specific hypotheses about these results. Thus, we only report the descriptive statistics.

Table 25. Participants' Estimates of Passengers' Behaviors

		% of passengers adjust forward (SD)	% of passengers adjust backward (SD)	% of passengers do not move (SD)
Follow Norm	Prosocial	25.63 (19.61)	31.64 (20.88)	42.73 (25.18)
	Selfish	14.74 (16.24)	29.03 (21.31)	56.23 (26.95)
Violate Norm	Prosocial	14.93 (15.22)	17.07 (17.52)	68.01 (27.41)
	Selfish	8.10 (13.94)	12.91 (14.91)	78.99 (23.31)

Table 26. What Participants Would Choose to Do if They Were on the Bus

		% adjust forward	% adjust backward	% do not move
Follow Norm	Prosocial	31.75	17.25	51.00
	Selfish	6.85	16.24	76.90
Violate Norm	Prosocial	10.28	6.17	83.55
	Selfish	2.97	4.70	92.33

Discussion

In Study P1, we found that the social impact of the behavior moderated norm violation effects on power perception. Selfish violators looked less powerful than the selfish non-violators. Prosocial violators looked as powerful as the prosocial non-violators. People were less willing to give power to norm violators, regardless of the consequences of the violation. This effect was stronger for selfish violation.

We found that prosocial norm violators were perceived as more agentic then prosocial norm followers. Selfish norm violation, however, did not signal more agency than selfish control.

Table 23 shows that selfish norm violation and selfish control were both perceived as agentic as prosocial norm violation, and more agentic than the prosocial control. This is likely due to participants perceiving both the selfish control behavior and the selfish norm violation behavior as norm violations. Some selfish behaviors are considered counter-normative, since they violate the social norms of fairness and justice (e.g., Fehr & Fischbacher, 2004). Manipulation check results supported this explanation: the selfish control behavior was rated as inappropriate (M = 3.08 on 7-point scale with 1 labeled as "Very Inappropriate" and 7 labeled as "Very Appropriate"). In fact, it was rated similarly as the prosocial violation behavior (M = 3.19) in terms of appropriateness (albeit still significantly more appropriate than the selfish violation behavior). Thus, participants perceived both the selfish violation behavior and the selfish control behavior as norm violations, and they perceived the selfish violation behavior as a stronger violation, potentially because it violated more than one norm. The results on perceived agency extended our understanding of how norm violation affects perceived agency of violator: while norm violations indeed signaled agency compared with no violation, selfish violation as a stronger violation did not strengthen the agency signal.

Consistent with Studies 2-4, we found that perceived communality also mediated norm violation effects on power perception. Participants perceived both prosocial and selfish violators as less communal than the respective control targets, which led to lower power perception of the norm violators. Our finding showed that people associate being powerful with being a communal non-violator rather than a selfish norm violator.

Contrary to the costly signal hypothesis of norm violation, participants discounted perceived communality of the prosocial target when the prosocial act violated a social norm. This finding supports the idea that norm violation is a signal of low communality, regardless of the social impact of the behavior. Although it is possible that the social impact manipulation in Study 2 did not cleanly manipulate prosociality. The prosocial target adjusted his or her seat forward to give more room to the colleague sitting behind. In the norm violation condition, the bus driver mentioned that the seat might get stuck if adjusted, which was the reason for the norm of no seat adjustment. Based on some participants' written comments, they inferred that adjusting the seat would lead to negative social impacts, such as causing problems for the driver or other people using this seat in the future. In the follow norm condition, the seat adjustment should only be seen as affecting the target and the person sitting behind. Thus, overall participants could have perceived the prosocial norm violation behavior as causing both positive and negative social impacts: giving more room to the passenger sitting behind but causing later trouble for the bus driver or future passengers using the seat. Meanwhile, participants should have perceived the prosocial control behavior as causing only the positive social impact of giving more room to the passenger sitting behind. In Studies 1-4, we carefully controlled for any incidental social impact of norm violation.

Study P2

Study P2 was a replication of Study P1's prosocial condition with an undergraduate student population. Since target gender did not affect results in Study P1, we used a female target in this study.

Participants

335 undergraduate students participated in this study in the Rady Behavioral Lab (34.9% women, Age *M* = 21.39, *SD* = 2.74). All participants passed the attention checks for the norm violation manipulation, the social impact of the target's behavior, and the target's gender.

Method

To make sure that participants perceived the target's prosocial behavior as intentional, we added one sentence in the vignette: "*A few minutes after the announcement, Jane adjusted her seat further up because she wanted to give the colleague sitting behind her more legroom.*" We used the same attention checks, manipulation check of the norm violation manipulation and the same measures for power perception, power conferral, perceived agency, and perceived communality as in Study P1. In addition, we also measured perception of how reasonable the norm was in the violation norm condition.

Results

Manipulation check. Participants rated adjusting the seat forward as less appropriate in the norm violation condition (*M* = 3.46, *SD* = 1.63) than in the follow norm condition (*M* = 5.08, *SD* = 1.27), $t(352) = -10.02$, $p < .001$, confirming the success of the norm violation manipulation.

Power perception. Norm violation did not affect power perception, the target was perceived as powerful in the norm violation condition (*M* = 4.14, *SD* = 0.83) as the follow norm condition (*M* = 4.11, *SD* = 0.67), $t(352) = 0.24$, $p = .711$.

Power conferral. Participants gave less power to the target in the norm violation condition (M = 4.01, SD = 1.11) than in the follow norm condition (M = 4.58, SD = 0.94), $t(352) = -4.82$, $p < .001$.

Perceived Agency. The target was perceived as more agentic (measured as perceived confidence and perceived autonomy as in Study 2) in the norm violation condition (M = 3.66, SD = 1.30) than in the follow norm condition (M = 3.02, SD = 1.10), $t(352) = 4.93$, $p < .001$.

Perceived Communality. The target was perceived as less communal in the norm violation condition (M = 4.41, SD = 1.39) than in the follow norm condition (M = 5.60, SD = 0.99), $t(352) = -8.34$, $p < .001$.

Norm Reasonableness. People perceived the norm in the norm violation condition as fairly reasonable (M = 5.16, SD = 1.70).

Mediation Analysis for power perception. We tested the mediation effects of perceived agency and perceived communality on power perception using the same method as Study 2. We found a positive indirect effect of perceived agency and a negative indirect effect of perceived communality, consistent with Study P1 and Studies 2-4 (Table 27).

Mediation Analysis of power conferral. We tested perceived agency, perceived communality, and power perception as mediators of power conferral with the same method as Study 2. We only found a negative indirect effect of perceive communality.

Table 27. Summary of Mediation Results in Study P2

		Power perception	Power conferral
Direct Effect		-.10[-.27, .07]	-.36[-.56, -.15]
Indirect Effect	Agency	**.16[.09, .26]**	.04[-.01, .11]
	Communality	**-.03[-.12, - .05]**	**-.28[-.40, -.17]**
	Power perception	-	-.02[-.09, .13]

Note. Significant indirect effects are in boldface.

Summary

In Study P2, we replicated most of the findings in the prosocial condition of Study P1: prosocial norm violation did not affect how powerful the violator appeared, but reduced the amount of power she received. The violator was perceived as more agentic and less communal. The mediation results were also similar to Study P1. In both studies, perceived agency and communality both drove power perception, while power conferral was mostly driven by perceived communality.

Study P3

Participants

818 participants participated in this study online through Amazon Mechanical Turk. 26 participants failed the attention check whether it was allowed to adjust the seat. Participants in the norm violation condition were more likely to fail this attention check (n = 20) than participants in the follow norm condition (n = 6), $F(1,810) = 7.59$, $MSE = 0.03$, $p = .006$, $\hat{\eta}_G^2 = .009$. 738 remained in the analyses (53.5% women, Age *M* = 35.55, *SD* = 11.89). Analyses based on the whole sample did not produce qualitatively different results.

Method

Study P3 examined prosocial norm violation using vignette in Study P2. Besides norm violation manipulation, we manipulated two additional factors in Study P3. The first one was the beneficiary of the target's prosocial act. We asked participants to either imagine they were sitting behind the target and got more leg room because the target adjusted her seat forward (benefit perceiver condition) or imagine a colleague of the target was sitting behind the target and benefited from her seat adjustment (benefit other condition, as in Study 2). We wanted to test if personally benefitting from the norm violation would lead to more positive reactions. The second was the way through which the rule was conveyed. We told participants either the bus driver announced the rule (bus driver condition, as in Study 2) or the rule was written on a sign on the bus (sign condition). Because some participants in Study P1 were concerned that adjusting the seat might cause trouble for the driver, we wanted to test if taking out this element would lead to better reactions to the prosocial norm violation. Study P3 had a 2 (Norm Condition: follow norm vs. violate norm) x 2 (Beneficiary: benefit perceiver vs. benefit other) x 2(Rule communication: bus driver vs. sign) between-subjects design.

We used the same power perception and power conferral measures as Study P1. But we use different measures for perceived agency and communality. Participants rated how much they perceive the target as agentic (confident, assertive, $\alpha = 0.80$), and communal (helpful, friendly, understanding, empathetic, $\alpha = 0.92$), on 7-point scales (1 = Not at all, 7 = Very much). We also included some filler items in the trait ratings (active, competent).

Results

Manipulation check. Participants rated adjusting the seat as less appropriate in the norm violation condition when the rule was to not adjust the seat (*M* = 2.92, *SD* = 1.58) than in the no violation condition when the rule was to not eat or drink in the bus (*M* = 6.30, *SD* = 0.92), $F(1{,}730) = 1{,}261.70$, $MSE = 1.68$, $p < .001$, $\hat{\eta}_G^2 = .633$, confirming the success of the norm violatio manipulation. The other two maniplations did not affect perception of appropriateness, nor was there any interaction, *ps* > .161.

Power perception. There was a significant main effect of norm violation, $F(1{,}730) = 6.15$, $MSE = 0.75$, $p = .013$, $\hat{\eta}_G^2 = .008$, as well as a significant main effect of beneficiary, $F(1{,}730) = 6.38$, $MSE = 0.75$, $p = .012$, $\hat{\eta}_G^2 = .009$. Participants perceived the target as less powerful when the target's prosocial behavior violated the norm (*M* = 4.89, *SD* = 0.91) than when the target's behavior did not violate the norm (*M* = 5.05, *SD* = 0.82). Participants perceived the target as more powerful when they imagined that target's prosocial behavior benefited themselves (*M* = 5.05, *SD* = 0.85) than when they imagined the prosocial behavior benefit another passenger (*M* = 4.89, *SD*= 0.89).Whether the rule was communicated by the bus driver or a sign did not affect power perception, nor was there any interactions, *ps* > .154.

Power conferral. There was a significant main effect of norm violation, $F(1{,}730) = 62.57$, $MSE = 1.25$, $p < .001$, $\hat{\eta}_G^2 = .079$, as well as a significant main effect of beneficiary, $F(1{,}730) = 10.01$, $MSE = 1.25$, $p = .002$, $\hat{\eta}_G^2 = .014$. Participants gave the target less power when the target's prosocial behavior violated the norm (*M* = 4.75, *SD* = 1.28) than

when the target's behavior did not violate the norm (*M* = 5.40, *SD* = 0.95). Participants gave the target more power when they imagined that target's prosocial behavior benefited themselves (*M* = 5.21, *SD* = 1.09) than when they imagined the prosocial behavior benefit another passenger (*M* = 4.95, *SD* = 1.23).Whether the rule was communicated by the bus driver or a sign did not affect power conferral, nor was there any interactions, *ps* > .266.

Perceived Agency. There was a significant main effect of norm violation, $F(1,730) = 5.15$, $MSE = 1.33$, $p = .024$, $\hat{\eta}_G^2 = .007$, as well as a significant main effect of beneficiary, $F(1,730) = 6.69$, $MSE = 1.33$, $p = .010$, $\hat{\eta}_G^2 = .009$. Participants perceived the target as more agentic when the target's prosocial behavior violated the norm (*M* = 5.40, *SD* = 1.20) than when the target's behavior did not violate the norm (*M* = 5.21, *SD* = 1.11). Participants also perceived the target as more agentic when they imagined that target's prosocial behavior benefited themselves (*M* = 5.41, *SD* = 1.02) than when they imagined the prosocial behavior benefit another passenger (*M* = 5.19, *SD* = 1.28).Whether the rule was communicated by the bus driver or a sign did not affect perceived confidence, nor was there any interactions, *ps* > .256.

Perceived Communality. We found a significant main effect of norm violation on perceived communality, $F(1,730) = 66.42$, $MSE = 1.01$, $p < .001$, $\hat{\eta}_G^2 = .083$. This main effect was qualified by a significnat interaction between the norm violation condition and whether the norm was communicated by the bus driver or by a sign, $F(1,730) = 7.89$, $MSE = 1.01$, $p = .005$, $\hat{\eta}_G^2 = .011$. Although participants always perceived the target as less

communal when her prosocial behavior violated the norm (M_{bus} = 5.35, SD_{bus} = 1.21; M_{sign} = 5.56, SD_{sign} = 1.15) than when the prosocial behavior did not violate the norm (M_{bus} = 6.16, SD_{bus} = 0.72; M_{sign} = 5.96, SD_{sign} = 0.86), the negative effect of norm violation was bigger when the norm was communicated by the bus driver (d = 0.73) than when it was communicated by a sign (d = 0.39).

Mediation Analysis for power perception. Using the same method as Study 2, we found a positive indirect of perceived agency and a negative indirect effect of perceived communality, consistent with previous studies (Table 28).

Mediation Analysis of power conferral. Using the same method as Study 2, we found negative indirect effects of perceived communality and power perception, consistent with Study P1 (Table 28).

Table 28. Summary of Mediation Results in Study P3

		Power perception	Power conferral
Direct Effect		-.16[-.26, .06]	-.35[-.47, -.24]
Indirect Effect	Agency	**.07[.00, .13]**	.03[-.00, .07]
	Communality	**-.06[-.09, -.03]**	**-.27[-.36, -.19]**
	Power perception	-	**-.06[-.12, -.01]**

Note. Significant indirect effects are in boldface.

Summary

In Study P3, we replicated the findings on prosocial norm violation on power perception, power conferral, perceived agency and perceived communality in Studies P1 and P2. Although participants perceived the target as more powerful, more agentic, and gave more power to the target when they imagine personally benefiting from the target's action. Beneficiary did not moderate any of the norm violation effects. Although prosocial norm

violation had less negative effect on perceived communality if no driver was involved, this did not change its effect on power perception or power conferral.

Study P4

Participants

808 participants participated in this study online through Amazon Mechanical Turk. 29 participants failed the attention check whether it was allowed to adjust the seat. Participants in the norm violation condition were more likely to fail this attention check (n = 22) than participants in the follow norm condition (n = 7), $F(1,804) = 7.47$, $MSE = 0.03$, $p = .006$, $\hat{\eta}_G^2 = .009$. Participants also were more likely to fail this attention check when they imagined that the target's seat adjustment gave themselves more legroom (n = 20) than when it was another passenger who benefited (n = 9), $F(1,804) = 4.41$, $MSE = 0.03$, $p = .036$, $\hat{\eta}_G^2 = .005$. There was no interaction, $F(1,804) = 2.69$, $MSE = 0.03$, $p = .101$, $\hat{\eta}_G^2 = .003$. 721 participants remained in the analyses (53.5% women, Age *M* = 35.43, *SD* = 11.62). Analyses based on the whole sample did not produce qualitatively different results.

Method

In Studies P1-P3, participants imagined themselves to be a colleague of the target. Thus, the norm violation they imagine to witnessed was committed by an ingroup member. In Study P4, we asked participants to instead imagine themselves to be outsiders to the company where the target worked: they were on the bus via invitation of a friend who worked the company to explore if reactions vary depends on whether the perceiver is an ingroup or

outgroup. In addition to prosocial norm violation, we also manipulated whether participants imagined the prosocial violation benefited themselves or another passenger, like Study P3. Participants imagined personally benefiting from the target's behavior. The rule was announced by the driver. Study P4 had a 2 (Norm Condition: follow norm / violate norm) x 2(Beneficiary: benefit perceiver vs. benefit other) between-subject design.

We used the same dependent measures as in Study P3, except for measures of the potential mediators. In Study P4, we used a different set of adjectives to measure agency (assertive, dominant, α = 0.79) and communality (warm, agreeable, responsible, trustworthy, α = 0.89).

Results

Manipulation check. Participants rated adjusting the seat as less appropriate in the norm violation condition when the rule was to not adjust the seat (*M* = 3.05, *SD* = 1.70) than in the no violation condition when the rule was to not eat or drink in the bus (*M* = 6.19, *SD* = 1.09), $F(1,717) = 868.74$, $MSE = 2.04$, $p < .001$, $\hat{\eta}_G^2 = .548$, confirming the success of the norm violatio manipulation. Whether participants imagined to personally benefit from the target's seat adjustment did not affect the manipualtion check result, $F(1,717) = 0.55$, $MSE = 2.04$, $p = .457$, $\hat{\eta}_G^2 = .001$. There was no interaction, $F(1,717) = 4.99$, $MSE = 2.04$, $p = .026$, $\hat{\eta}_G^2 = .007$.

Power perception. Norm violation did not affect power perception, $F(1,717) = 0.46$, $MSE = 0.88$, $p = .496$, $\hat{\eta}_G^2 = .001$. But there a main effect of beneficiary, $F(1,717) = 5.61$,

$MSE = 0.88$, $p = .018$, $\hat{\eta}_G^2 = .008$. Participants perceived the target as more powerful when they imagined that target's prosocial behavior benefited themselves (*M* = 4.63, *SD* = 0.86) than when they imagined the prosocial behavior benefit another passenger (*M* = 4.47, *SD* = 1.00).There was no interaction, $F(1,717) = 0.00$, $MSE = 0.88$, $p = .958$, $\hat{\eta}_G^2 = .000$.

Power conferral. There was a significant main effect of norm violation, $F(1,717) = 50.14$, $MSE = 1.28$, $p < .001$, $\hat{\eta}_G^2 = .065$, as well as a significant main effect of beneficiary, $F(1,717) = 7.46$, $MSE = 1.28$, $p = .006$, $\hat{\eta}_G^2 = .010$. Participants gave the target less power when the target's prosocial behavior violated the norm (*M* = 4.74, *SD* = 1.28) than when the target's behavior did not violate the norm (*M* = 5.33, *SD* = 0.98). Participants gave the target more power when they imagined that target's prosocial behavior benefited themselves (*M* = 5.15, *SD* = 1.12) than when they imagined the prosocial behavior benefit another passenger (*M* = 4.91, *SD* = 1.22).There was no interaction, $F(1,717) = 1.25$, $MSE = 1.28$, $p = .263$, $\hat{\eta}_G^2 = .002$.

Perceived Agency. There was a significant main effect of norm violation, $F(1,717) = 82.98$, $MSE = 1.97$, $p < .001$, $\hat{\eta}_G^2 = .104$. Participants perceived the target as more agentic when the target's prosocial behavior violated the norm (*M* = 4.85, *SD* = 1.50) than when the target's behavior did not violate the norm (*M* = 3.89, *SD* = 1.30). There was no effect of beneficiary,$F(1,717) = 1.44$, $MSE = 1.97$, $p = .230$, $\hat{\eta}_G^2 = .002$; nor an interaction, $F(1,717) = 0.05$, $MSE = 1.97$, $p = .830$, $\hat{\eta}_G^2 = .000$.

Perceived Communality. Participants perceived the target as less communal when the target's prosocial behavior violated the norm (M = 4.60, SD = 1.32) than when the target's behavior did not violate the norm (M = 5.78, SD = 0.91), $F(1,717) = 195.38$, $MSE = 1.30$, $p < .001$, $\hat{\eta}_G^2 = .214$. There was no effect of beneficiary,$F(1,717) = 1.54$, $MSE = 1.30$, $p = .215$, $\hat{\eta}_G^2 = .002$; nor an interaction, $F(1,717) = 0.30$, $MSE = 1.30$, $p = .585$, $\hat{\eta}_G^2 = .000$.

Mediation Analysis for power perception. Using the same method as Study 2 and consistent with other studies, we found a positive indirect of perceived agency and a negative of indirect effect perceived communality (Table 29).

Mediation Analysis of power conferral. Using the same method as Study 2, we found a negative indirect effect of perceived communality. There was also a positive indirect effect of perceived agency (Table 29).

Table 29. Summary of Mediation Results in Study P4

		Power perception	Power Affordance
Direct Effect		-.11[-.24, .01]	-.04[-.17, .08]
Indirect Effect	Agency	**.23[.17, .31]**	**.09[.05, .14]**
	Communality	**-.20[-.27, -.13]**	**-.59[-.71, .49]**
	Power perception	-	-.03[-.07, .02]

Note. Significant indirect effects are in boldface.

Summary

In Study P4, we found the effects of prosocial norm violation as Studies P1 – P3. Asking participants to imagine themselves as an outgroup did not alter the effects of prosocial norm violation. We also replicated the positive effects of beneficiary, but it did not moderate effects of the prosocial norm violation.

Study P5

Participants

813 participants participated in this study online through Amazon Mechanical Turk. 25 participants failed the attention check whether it was allowed to adjust the seat. Norm violation manipulation did not affect participants' response to the attention check, $F(1,809) = 3.18$, $MSE = 0.03$, $p = .075$, $\hat{\eta}_G^2 = .004$. The target's job competence also did not affect this attention check, $F(1,809) = 0.02$, $MSE = 0.03$, $p = .876$, $\hat{\eta}_G^2 = .000$. There was no interaction, $F(1,809) = 0.01$, $MSE = 0.03$, $p = .909$, $\hat{\eta}_G^2 = .000$. 38 participants failed the attention check for whether the target has high or low job competence. More participants failed the attention check when the target had low job competence (n = 32) than when the target had high job competence (n = 6), $F(1,809) = 18.77$, $MSE = 0.04$, $p < .001$, $\hat{\eta}_G^2 = .023$. Norm violation manipulation did not affect participants' response to the attention check, $F(1,809) = 0.08$, $MSE = 0.04$, $p = .779$, $\hat{\eta}_G^2 = .000$. There was no interaction, $F(1,809) = 0.04$, $MSE = 0.04$, $p = .845$, $\hat{\eta}_G^2 = .000$. 716 participants remained in the analyses (57.9% women, Age *M* = 36.30, *SD* = 12.71). Analyses based on the whole sample did not produce qualitatively different results.

Method

In Study P5, in additional to manipulating prosocial norm violation, we varied information about the target's job competence. Like Study P4, the rule was announced by the bus driver and participants imagined themselves getting more room due to the target's seat

adjustment. Before participants read the seat adjustment vignette, participants first read a short description about the target, Jane. In the high job competence condition, participants read that: “Jane is very competent at her job. Last year, she was recognized as a "top contributor" in the company.” In the low job competence condition, participants read that: “Jane is not very competent at her job. Last year, her performance was below average in the company.” We wanted to explore if target’s status (here manipulated as competence) will moderate the effect of prosocial norm violation. Past literature (e.g. Hollander, 1958) has shown group members with high status have more latitude to violate norms without negative consequences. Study P5 had a 2(Norm Condition: no violation vs. norm violation) *2(Job Competence: high competence vs. low competence) between-subject design. We used the same dependent measures as Study P4.

Results

Manipulation check. Participants rated adjusting the seat as less appropriate in the norm violation condition when the rule was to not adjust the seat (*M* = 2.71, *SD* = 1.45) than in the no violation condition when the rule was to not eat or drink in the bus (*M* = 6.07, *SD* = 1.02), $F(1,712) = 1{,}308.93$, $MSE = 1.54$, $p < .001$, $\hat{\eta}_G^2 = .648$, confirming the success of the norm violatio manipulation. Job competence also had a main effect, $F(1,712) = 14.28$, $MSE = 1.54$, $p < .001$, $\hat{\eta}_G^2 = .020$. Participants perceived the target’s behavior as less appropriate when the target is less competence at her job (*M* = 4.17, *sd* = 2.19) than when the

target is more competent at her job (*M* = 4.57, *SD* = 1.98).There was no interaction, $F(1,712) = 6.18$, $MSE = 1.54$, $p = .013$, $\hat{\eta}_G^2 = .009$.

Power perception. Norm violation did not affect power perception, $F(1,712) = 0.55$, $MSE = 0.71$, $p = .458$, $\hat{\eta}_G^2 = .001$. But there a main effect of target's job competence, $F(1,712) = 1{,}154.54$, $MSE = 0.71$, $p < .001$, $\hat{\eta}_G^2 = .619$. Participants perceived the target as more powerful when the target had high job competence (*M* = 3.15, *SD* = 0.87) than when the target had low job competence (*M* = 5.29, *SD* = 0.81).There was no interaction, $F(1,712) = 1.93$, $MSE = 0.71$, $p = .166$, $\hat{\eta}_G^2 = .003$.

Power conferral. There was a significant main effect of norm violation, $F(1,712) = 16.18$, $MSE = 1.34$, $p < .001$, $\hat{\eta}_G^2 = .022$, as well as a significant main effect of target job competence, $F(1,712) = 674.31$, $MSE = 1.34$, $p < .001$, $\hat{\eta}_G^2 = .486$. Participants gave the target less power when the target's prosocial behavior violated the norm (*M* = 4.20, *SD* = 1.66) than when the target's behavior did not violate the norm (*M* = 4.55, *SD* = 1.56). Participants gave the target more power when the target had high job competence (*M* = 3.21, *SD* = 1.34) than when they had low job competece (*M* = 5.47, *SD* = 0.97).There was no interaction, $F(1,712) = 0.03$, $MSE = 1.34$, $p = .858$, $\hat{\eta}_G^2 = .000$.

Perceived Agency. There was a significant main effect of norm violation, $F(1,712) = 10.50$, $MSE = 1.46$, $p = .001$, $\hat{\eta}_G^2 = .015$. Participants perceived the target as more agentic when the target's prosocial behavior violated the norm (*M* = 4.28, *SD* = 1.63)

than when the target's behavior did not violate the norm (*M* = 3.98, *SD* = 1.48). Participants perceived the target as more agentic when the target had high job competence (*M* = 3.12, *SD* = 1.24) than when they had low job competence (*M* = 5.08, *SD* = 1.20). There was no interaction, $F(1,712) = 0.59$, $MSE = 1.46$, $p = .443$, $\hat{\eta}_G^2 = .001$.

Perceived Communality. Participants perceived the target as less communal when the target's prosocial behavior violated the norm (*M* = 4.73, *SD* = 1.32) than when the target's behavior did not violate the norm (*M* = 5.31, *SD* = 1.06), $F(1,712) = 56.02$, $MSE = 1.08$, $p < .001$, $\hat{\eta}_G^2 = .073$. Participants perceived the target as less communal when the target had high job competence (*M* = 4.40, *SD* = 1.11) than when they had low job competence (*M* = 5.60, *SD* = 1.04). There was no interaction, $F(1,712) = 0.05$, $MSE = 1.08$, $p = .818$.

Mediation Analysis for power perception. Using the same method as Study 2 and consistent with other studies, we found a positive indirect of perceived agency and a negative of indirect effect perceived communality (Table 30).

Mediation Analysis of power conferral. Using the same method as Study 2, we found a negative indirect effect of perceived communality. There was also a positive indirect effect of perceived agency (Table 29).

Table 30. Summary of Mediation Results in Study P5

		Power perception	Power Affordance
Direct Effect		.01[-.12, .14]	-.07[-.20, .06]
Indirect Effect	Agency	**.13[.02, .24]**	**.05[.01, .10]**
	Communality	**-.17[-.24, -.12]**	**-.34 [-.43, -.24]**
	Power perception	-	-.02[-.10, .07]

Note. Significant indirect effects are in boldface.

Summary

Although participants perceived the more competent target as more agentic, powerful, and gave her more power. Target competence did not moderate any effects of the prosocial norm violation. Participants also perceived the highly competent target as less communal, potentially due to a warmth-competence trade-off (Susan T. Fiske, Cuddy, & Glick, 2007). We did not find evidence for highly competent group member having more latitude in violating this specific norm. It is possible that the idiosyncratic credit only applies to certain group norms, not generally applicable norms. Future research can explore this question.

Chapter 7: Meta-analysis

To summarize the results of all nine studies (N_{total} = 5255), we conducted two meta-analyses with random effects models: one for the effect of prosocial norm violation effect on power perception, the other for its effect on power conferral. Table 29 summarizes the key information of each study (only the prosocial condition was included for Study 3 and Study P1). Figures 5 and 6 show the effect size of each study and the overall meta-effect of the meta-analysis. Overall, prosocial norm violators were slightly less powerful than prosocial norm followers (Hedges' g = -.10[-.17, -.03]), but they received substantially less power (Hedges' g = -.45[-.55, -.34]).[4]

Table 31. Key Information of Studies in the Meta-analysis

Study	N	Sample
Study 1	212	Undergraduate
Study 2	299	Mturk
Study 3	134	Undergraduate
Study 4	1415	Undergraduate and Mturk
Study P1	666	Mturk
Study P2	354	Undergraduate
Study P3	738	Mturk
Study P4	721	Mturk
Study P5	716	Mturk

[4] The meta-analysis showed a small amount of heterogeneity across studies for power perception, I^2 = 43.45%, $Q(8)$ = 15.69, p = .047, and a moderate amount of heterogeneity for power conferral, I^2 = 71.21%, $Q(8)$ = 30.08, p < .001. The I^2 statistic indicates the percentage of total variability accounted by study heterogeneity (Hamilton, 2017).

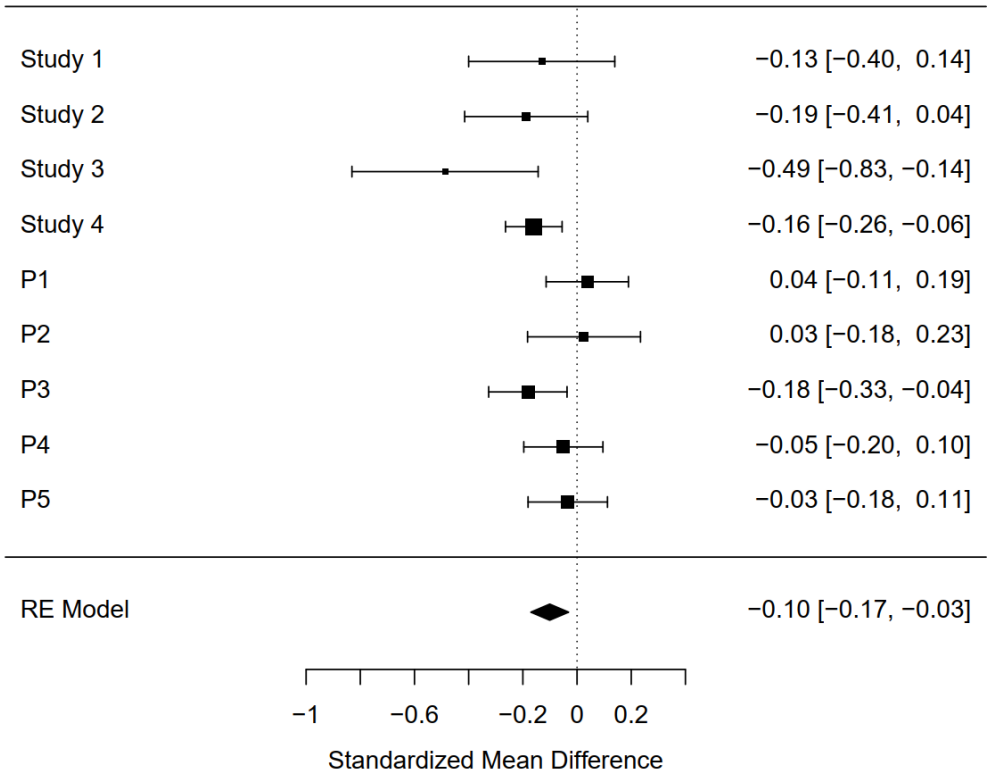

Figure 5. Forest Plot of the Effects of Prosocial Norm Violation on Power Perception
Notes: The size of each square indicates the weight of the corresponding study. The effect size of each study (Cohen's d) and its 95% confidence intervals are shown on the right. The bottom row in the figure presents the overall meta-effect of norm violation (Hedges' g)

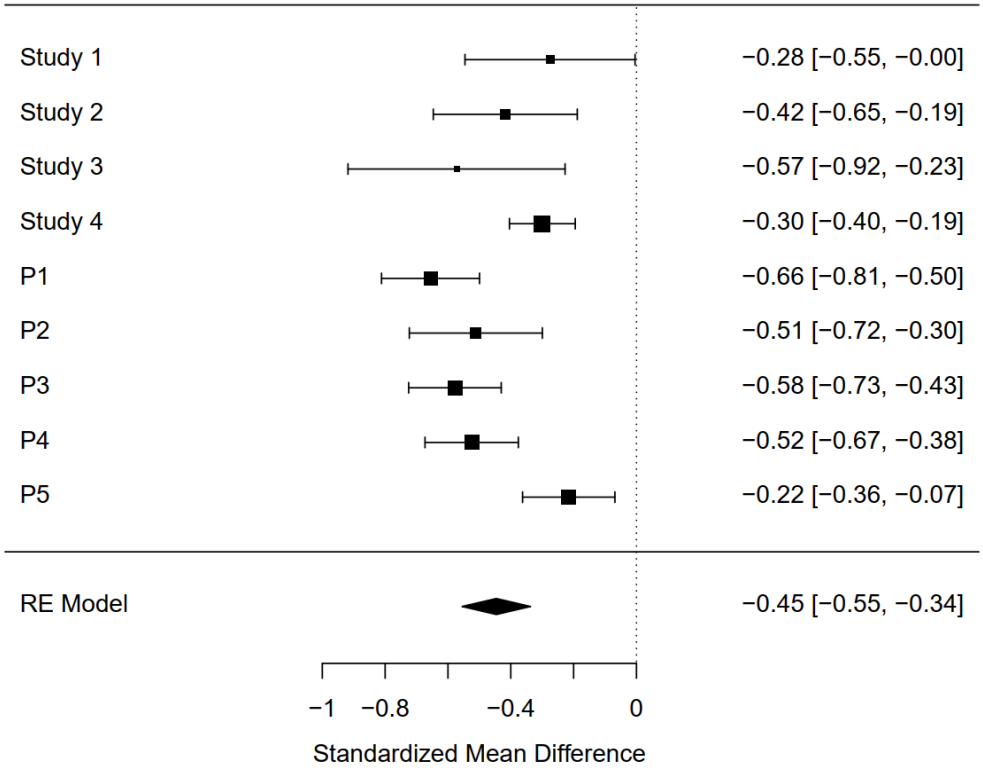

Figure 6. Forest Plot of the Effects of Prosocial Norm Violation on Power Conferral. *Notes*: The size of each square indicates the weight of the corresponding study. The effect size of each study (Cohen's d) and its 95% confidence intervals are shown on the right. The bottom row in the figure presents the overall meta-effect of norm violation (Hedges' g)

Chapter 8: General Discussion

Main findings and contributions

Past research on social reactions to norm violation focused on violations that did not benefit others. The current research shifted the focus to prosocial norm violations. We set out to test whether prosocial norm violation can be a pathway to power. We found that prosocial norm violators looked slightly less powerful and received substantially less power than prosocial norm followers. These negative effects were mitigated for violations with higher prosocial impact but not reversed.

We also examined the inferences that drove the effects on power perception and power conferral. Prosocial norm violators were perceived as more agentic than prosocial norm followers, as hypothesized. They were also perceived as less communal, which challenged the costly signal hypothesis of prosocial norm violation. The negative effect of prosocial norm violation on perceived communality can be explained by the finding that people perceived the same prosocial act as producing a more positive social impact when it followed social norms, compared to when it violated social norms. Although we used relatively innocuous violations such as violation of dress codes, people still perceive norm violation itself as having a negative impact on others.

These findings also raised questions about past understanding of the relationship between perceptions of power, agency, and communality. Various twofold models of social cognition such as the agency and communality model (Abele & Wojciszke, 2014) and the warmth and competence (stereotype content) model (Fiske et al., 2002) groups power with

agency (or competence) as opposed to communality (or warmth). However, we found that prosocial norm violation makes the violator look more agentic, but less communal and less powerful. Past research on norm violation suggested perceived agency would drive norm violation effects on power perception. We found that perceived communality also mediated the effects on power perception. Prosocial norm violators were perceived as more agentic, which increased power perception, but also less communal, which decreased power perception. These findings suggest that social cognition models should re-evaluate the concept of power and its relation to the two fundamental dimensions of social cognition.

Our findings also contribute to power literature by furthering the current understanding of power perception and power conferral. We found that perceived communality also mediated the effects on power perception. Prosocial norm violators were perceived as more agentic, which increased power perception, but also less communal, which decreased power perception. For power conferral, past research suggested that power perception and perceived communality could both drive norm violation effects on power conferral. Consistently, we found that prosocial norm violators were perceived as less powerful and less communal, both of which decreased power conferral. Moreover, perceived communality had a bigger indirect effect than power perception, suggesting it was a more important driver of power conferral. The finding about the drivers of power conferral qualifies previous understanding of the positive relationship between power perception and power conferral. It implies that while signaling power can increase power conferral, if the power-

signaling behavior also makes the actor look less communal, it is likely to decrease power conferral overall.

With nine studies examining violations of four different norms, we investigated reactions to prosocial norm violations in vignettes and in face-to-face interactions. We used two types of norm violation manipulations. In Studies 1, 3, and 4, we manipulated norm violation through fixing the norm and varying target behavior. Some of the past research examining power perception of (selfish/self-interested) norm violators manipulated norm violation with the violator displaying an expansive posture (e.g. putting feet on the table) and norm follower displaying a constrictive posture (e.g. sitting with legs crossed) (van Kleef et al., 2011, studies 3 and 4). Because expansive postures signal higher power (Al-issa, Bente, Leuschner, Al, & Blascovich, 2010; Tracy, Shariff, Zhao, & Henrich, 2013), the positive effect of violation on power perception observed in these studies could be caused by posture instead of norm violation. Thus, in Studies 1, 3, and 4, we controlled for the confound of body expansiveness which may have affected findings in past research. In Studies 2, P1 – P5, we manipulated norm violation through fixing target behavior and varying the norm, providing further support that the effects we found should be attributed to norm violation.

We also varied the whether the target's behavior benefited an individual (Studies 1, P1-P5) or a group (Studies 2-4). Past research on prosocial norm violation has focused on violations that benefited one or two individuals (Popa, et al., 2014; van Kleef, et al., 2012). Since power conferral depends on whether the target can advance group interests (Keltner, et al, 2008), violating norm to benefit the group should be more likely to increase power

conferral. However, prosocial norm violation reduced power conferral in all of our studies, even when it benefited the group.

Caveats and directions for future research

In the current research and other existing experimental research on prosocial norm violation we are aware of, participants know very little about the target other than the fact that s/he committed one prosocial violation. Thus, their perception of the target's agency and communality are solely based on one observation. While this is often true when people observe or hear about prosocial violation of a stranger or a new colleague they just met, it is also common to observing prosocial violations committed by others you already know. In these cases, people would already have an impression of the target person's agency and communality. It is worth considering whether prior knowledge about the target person would moderate the effect of prosocial violation. For example, if the observer already perceives the norm violator as communal or agentic based on past interactions or reputation information, how would these perceptions be updated upon observing a prosocial violation? It is plausible that when there is a strong prior (e.g. when the observer is very sure that the target is highly communal or super selfish), it could buffer against impress updating (prosocial violation will not lower the communality perception much). However, emerging research on impression updating indicates that people update their impression of a person's morality (which is a part of communality) more than their impression of a person's competence (which is related to agency), upon learning new relevant information (Brambilla, Carraro, Castelli, & Sacchi, 2019). If so, it is likely that prosocial violator will be take a bigger hit on perceived

communality than the boost s/he gets on perceived agency, even when the perceive already knows them. Future research is needed to understand the effect of prosocial violation in the impression updating framework.

In the current research, participants did not experience or witness (all) the social impacts of the target's behavior, such as how much benefit or harm were actually generated by the behavior or how others reacted to the behavior. For example, in Studies 2-4, participants inferred that the prosocial violation would bring benefits (and harm, to a lesser extent) to others, as shown in the pretest results, but they did not receive information on how much benefits were actually generated by the violator's behavior or if people appreciated the prosocial violations. This is often true in real life. For example, it is hard to be sure about what direct and indirect impacts resulted from Kaepernick's protest. Sometimes, people may learn about how others react to a prosocial violation if they witness it with others or hear it from others. But they may also observe a prosocial violation alone, such as in dyadic interactions like Study 1, or learn about it through others without learning about what others thought about it. In the current research, we only studied the first-degree effects of prosocial norm violation: how do people react to the prosocial violation behavior itself. We did not study second-degree effects: how do people react when they have clear information about the impacts of the behavior and others' reactions to it. Future research can explore these second-degree effects.

In the current research, we tried to equate the perceived benefits of the prosocial norm violation behavior and the prosocial norm-following behavior as much as possible. For example, in Study 1, both the norm violation behavior (borrowing the birthday gift pen) and the norm-following behavior (sharing extra lead) helped the participants to fill out their questionnaires. However, as discussed above, participants still perceived the prosocial norm violation as less beneficial overall, presumably because they perceived norm violation itself as generating a negative social impact. It is possible that in certain situations, the benefits of a prosocial act will be enhanced if it violates norms. Norm violations often attract more attention than behaviors that follow social norms (Ridgeway, 1978, 1981). If attracting attention is critical for helping others, then violating a norm could generate more benefit than following norm. In these situations, prosocial norm violators might be perceived as communal as, or even more communal than, prosocial norm followers, and thus look more powerful and gain more power.

We studied situations in which it was reasonable to assume that the targets can help others either by violating norm or not violating norm. For example, in Study 2, it is easy to imagine that the target could share the townhall meeting information with her colleagues through channels other than the one reserved for professional events. In these situations, when evaluating the prosocial norm violator, people might naturally compare violating a norm to the possibility of helping without violating norms. For instance, some critics of Colin Kaepernick admired his intentions but were disappointed that he did not advocate for his cause in a more appropriate, non-norm-violating fashion (Beinart, 2016). In situations where

violating a norm is the only way to help, prosocial norm violation might be evaluated more positively. If the prosocial impact cannot be achieved without violating a norm, people may naturally compare prosocial norm violation to the counterfactual of not helping. In these cases, prosocial norm violation is likely to be perceived as more communal than not helping, and thus making the violator look more powerful and gain more power.

Past research has shown that country-level collectivism/individualism moderated the effects of selfish norm violation on both power perception and power conferral (Stamkou, et al., 2018). The majority of our sample (69.32%) reported being White/European American and 14.67% reported being Asian or Asian American. As an exploratory analysis, we conducted a meta-analysis of prosocial norm violation effects on power perception with race as a moderator. We did not find any significant moderation of prosocial norm violation effects on power perception or power conferral. In Study 4, we measured cultural orientation at the individual level, and found that people with high vertical individualism gave as much power to high-impact prosocial norm violators as what they gave to high-impact prosocial norm followers. We did not find any moderation on power perception. Since our samples were either MTurk workers based in the Unites States and undergraduate students at a U.S. university, we may not have had a sufficiently diverse sample to investigate cultural differences. Future research should further explore whether and how culture moderates social reactions to prosocial norm violations.

In conclusion, across several studies, violating a norm to help others led to mixed social outcomes: while prosocial violators were perceived as more agentic, they were also

perceived as less communal and less powerful, and were given less power. Prosocial norm violation appears to not be a clear pathway to power.

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