

WHEN LESS IS ENOUGH: THE RELATIONSHIP BETWEEN PROSOCIAL
EFFORT AND MORAL CHARACTER JUDGMENTS

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ABSTRACT

The amount of effort required to carry out a prosocial act (i.e., prosocial effort) can vary from minimal (e.g., handing a stranger the wallet she just dropped) to extreme (e.g., spending days tracking down the owner of a lost wallet). Does higher prosocial effort lead to higher moral character judgments? The goal of the current research is to characterize the relationship between prosocial effort and moral character judgments. We test three competing theoretical perspectives, which predict that this relationship is monotonically positive (the monotonic perspective), positive but plateaus at higher levels of prosocial effort (the diminishing-returns perspective), and positive at lower levels of prosocial effort but negative at higher levels of prosocial effort (the backlash perspective). Across four studies we find evidence for the diminishing-returns perspective: moral character judgments increase from lower to moderate prosocial effort and plateau at higher levels. Studies 1 and 2 test the relationship between prosocial effort and moral character judgments. Studies 3-4 replicate the effect across several prosocial domains and test potential mechanisms for the relationship. We discuss limitations and implications for research on effort and prosocial behavior.

BIOGRAPHICAL SKETCH

Zachariah Berry was raised in St. Paul, MN. He earned a BA in Psychology and a BA in Philosophy from Bethel University in 2015. At Bethel, he discovered his love for psychology and philosophy, which grew into a deep interest in understanding the psychology of moral beliefs, moral judgments, and moral behavior. He went on to earn an MA in Social Science at the University of Chicago in 2017, where he worked primarily with Alex Shaw to study how people assess the veracity of social information. He started his PhD in Organizational Behavior at Cornell University in 2018.

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Introduction

Imagine that you find a wallet on the ground, and realize that it belongs to the person 10 feet away from you. You grab the wallet, and hand it back to the owner. Most people would agree that what you did was prosocial, and most people will evaluate your moral character positively. Now imagine the same situation, except the owner is not standing 10 feet away from you. You grab the wallet, and spend 1 hour looking around before you find the owner of the wallet and hand it back to them. In this scenario you put in much more effort than in the first scenario to return the stranger's wallet, and most people would agree that you are more moral for putting in this higher amount of effort to return the wallet. But, imagine the same scenario, except this time you spend 2 hours searching for the individual rather than 1 hour. Clearly you put in more effort to return the wallet, but are you seen as any more moral for putting in 2 hours to return the wallet rather than 1 hour? Does putting in more effort to do something prosocial make you appear more moral? And if so, does more effort always lead to higher moral character evaluations?

In the present work we seek to characterize the relationship between prosocial effort—the amount of effort required to do something prosocial—and moral character judgments. On one hand, putting in more effort to do something prosocial may increase moral character judgments. This is in line with the idea that society tends to value and reward effort (Norton, Mochon, & Ariely, 2012). But, is putting in more effort always seen as better? Aristotle famously spoke of virtues existing as a golden mean somewhere between deficiency (i.e., too little) and excess (i.e., too much) (Nicomachean Ethics, 1106a26–b28). A virtuous person—someone with high moral

character—who administers high prosocial effort may be viewed as doing too much, leading observers to not reward the behavior with moral credit (e.g., Klein & Epley, 2014). However, doing too much may even pose a threat to observers, leading observers to derogate the actor’s moral character rather than simply not reward it (Minson & Monin, 2012). In four studies, and across five prosocial domains, we test whether putting in more effort to do something prosocial leads to higher moral character judgments, and provide evidence for explanations of the relationship between prosocial effort and moral character judgments. Next, we lay out three competing theoretical perspectives that might explain this relationship.

Competing Theoretical Perspectives

There are at least three theoretical perspectives that speak to the relationship between the amount of prosocial effort someone invests to bring about a prosocial act and observers’ judgments of that person’s moral character.

The first perspective suggests that moral character monotonically increases with prosocial effort (*monotonic* perspective). In other words, more prosocial effort always produces higher moral character judgments. This perspective is in line with the idea that effort is highly valued. For instance, investing effort increases the perceived value of people’s own work (Festinger, 1957; Norton et al., 2012), of others’ work (Kruger et al., 2004), and even of people’s social groups (Aronson & Mills, 1959). Research finds that effort is also valued in the moral domain. In one study, participants donated more money for a charity event when the event required them to exert higher effort (charity run) versus lower effort (a picnic; Olivola & Shafir, 2013). In another study, participants evaluated people as more moral after they engaged in a more

effortful act (e.g., running off of a bus to return a dropped wallet) versus a less effortful act (e.g., handing a stranger the wallet she just dropped; Bigman & Tamir, 2016). Finally, Robinson and colleagues (2017) found that participants evaluated the morality of an actor as higher when the actor increased effort to do something moral, regardless of the actor's moral motives (i.e., deontological motives or utilitarian motives). Taken together, this research supports the prediction that higher prosocial effort always leads to higher moral character judgments.

The second perspective suggests that the relationship between prosocial effort and moral character is curvilinear: moral character increases from low to moderate levels of prosocial effort, but plateaus (the *diminishing returns* perspective). This perspective harkens back to Aristotle's idea that the virtuous person's actions must lie in-between doing too little (i.e., deficiency) and doing too much (i.e., excess; Nicomachean Ethics, 1106a26–b28). For example, a truly courageous person is someone who understands that some dangers are worth facing but others are not, thus existing in-between the coward and the rash. Indeed, work in psychology and management acknowledge theoretically and empirically that there can be “too much of a good thing” (for reviews see Grant & Schwartz, 2011; Pierce & Aguinis, 2013). Prosocial actors who administer higher effort may not be rewarded for their efforts because they are doing too much (i.e., acting in excess). This perspective also builds on the expectation that people tend to operate in a self-interested manner throughout the social world, so moderate displays of prosocial effort may be all that is required to receive the full moral character evaluations following a prosocial act (e.g., Miller, 1999; Newman & Cain, 2014). As such, people who observe prosocial actors

administering more than a moderate display of prosocial effort may believe that the prosocial actor possess some ulterior motives (e.g., desire for reputational benefits or reciprocity). In addition, observers may think that a prosocial actor administering more than a moderate display of prosocial effort is violating social norms, specifically norms for how much effort *should* be administered in the situation. For example, spending hours searching for the owner of a lost wallet may go too far past the level of effort that most people think should be applied to return a lost wallet. If higher prosocial effort is seen as counter-normative, then people may stop rewarding that behavior. Finally, people may see prosocial actors who administer more than moderate prosocial effort as unfriendly, less warm, and less sociable (Wolf, 1982). Relatedly, these prosocial actors may be seen as less competent (e.g., a competent and moral person would have turned over the lost wallet to the police instead of spending hours looking for the owner). Judgments of a prosocial actor's competence and warmth are important for judgments of their moral character (Goodwin et al., 2014; Landy, Piazza, & Goodwin, 2016), so if a prosocial actor is evaluated as less competent or warm following prosocial behavior then judgments of their moral character will be constrained. Existing empirical work in the moral domain supports this reasoning. Klein and Epley (2014) found that donators are evaluated as much warmer and generous for donating the suggested dollar amount at a charity event rather than donating no money. However, when donators donated above the suggested dollar amount, they were not seen as any warmer or more generous than donators who donated the suggested amount. Taken together, this perspective predicts that

increasing prosocial effort should lead to higher moral character evaluations, but these character evaluations will plateau.

The third perspective suggests that moral character judgments will increase with prosocial effort up to a point but decrease after that, making the relationship between prosocial effort and moral character judgments look like an inverted-U (the *backlash* perspective). The reasons for expecting backlash are similar to some of the reasons for expecting diminishing returns, but they vary in degree: observers will think that the prosocial actor who is administering such high effort is acting with harmful rather than neutral ulterior motives, and is in violation of social norms that solicit moral self-threat in observers. The nature of these norm violations and ulterior motives are stronger and more extreme, which lead to a decrease in moral character judgments rather than a plateau. Existing research has documented many ways in which doing more leads to negative responses (for review, see Grant & Schwartz, 2011; Pierce & Aguinis, 2013). For example, Minson & Monin (2012) found that when an actor strongly adhered to moral principles that were not considered socially normative, people experienced moral self-threat and derogated the actor's moral character. Relatedly, when a leader is highly (versus moderately) ethical, employees anticipate moral reproach and reduce their organizational citizenship behaviors (Stouten et al., 2013). Developmental research finds that even children derogate the character of their extremely generous peers (Tasimi, Dominguez, & Wynn, 2015). Taken together, this perspective predicts that increasing prosocial effort should lead to higher moral character judgments up to a point but lead to lower moral character judgments after that.

Taken together, past research suggests a positive relationship between an actor's prosocial effort and judgments of that person's moral character (e.g., Bigman & Tamir, 2016). However, we suspect that this work is limited in the range of prosocial effort tested. For example, the positive effect of prosocial effort on character judgments found by Bigman and Tamir (2016) compared a relatively minimal-effort act (e.g., picking up a wallet to return it) with a moderate-effort act (e.g., running off a bus to return a wallet). It is unclear whether the positive relationship would extend to higher-effort acts (e.g., searching for hours to return a wallet). It is possible that, with higher prosocial effort, moral character evaluations would continue to increase (monotonic perspective), plateau (diminishing returns perspective), or even decrease (backlash perspective).

We designed four experimental studies to explore whether the relationship between prosocial effort and moral character judgments is best described by the monotonic (H1A), diminishing returns (H1B), or the backlash (H1C) perspectives. As mechanisms we explored the roles of ulterior motives, social norms, warmth, and competence.

Overview of Studies

We tested our hypotheses across four studies. Study 1 provided an initial test of the relationship between prosocial effort and moral character judgments and Study 2 ruled out a methodological alternative explanation. In Study 3 we tested the relationship in four additional prosocial domains and explored potential mechanisms for the effect. Study 4 served as a robust replication of Study 3 and ruled out an alternative mechanism.

Study 1

We designed Study 1 to characterize the relationship between prosocial effort and moral character judgments.

Method

Participants. We recruited 201 participants (45% female, $M_{\text{age}} = 34.8$ years, $SD_{\text{age}} = 10.6$) via Amazon's Mechanical Turk. We determined sample size with a heuristic of 200 participants for every cell in a within-subjects design. Here, and in all subsequent studies, participants were compensated for participating and we took a number of steps to promote data quality: We restricted participation to the United States, required participants to pass an image-based "captcha" before the consent form to screen out non-humans, and restricted participants of one study from participating in subsequent studies.

Procedure. Study 1 used a within-participants design. Participants read six brief scenarios and responded to the primary study variables after each scenario.

Effort Manipulation. Participants read six versions of a scenario in which an actor, Joseph, helped a stranger with his car trouble. The effort required to help the stranger increased between scenarios, such that in scenario 1 Joseph exerted minimal effort and in scenario 6 Joseph exerted the highest amount of effort. In each version, the scenario began the same way, with Joseph pulling over on the side of the road to help a stranger whose car had broken down. In the scenarios, the stranger expressed distress to Joseph because he needed to get to an important work meeting. In each version of the scenario, Joseph successfully helped the man by giving him a ride to work. In scenario 1, minimal effort was required to help. For instance, we say, "It

turns out that [the stranger] needs to get to the same street as Joseph, so giving him the ride doesn't actually require any special effort on Joseph's side. Joseph agrees to give him a ride to work." Then the amount of effort increases across scenarios. By scenario 6, Joseph drives two hours out of his way to take the man to work, and gives the man a ride to and from work for a week while the man's car gets fixed (see full text of all conditions in Appendix A).

Measures

After reading each scenario, participants rated the prosocial actor's moral character by indicating how much they thought he was *moral* and *honest* (7-point scale; 1 = *not at all*, 7 = *extremely*; $r(201) = .70$; measures adapted from Goodwin et al., 2014). Then, as a manipulation check, participants rated how much effort they thought the prosocial actor exerted to bring about the prosocial outcome (7-point scale; 1 = no effort at all, 7 = extreme effort). Thus, each participant provided six moral character and effort ratings. Finally, participants reported their age, gender, race, and political affiliation (see supplementary online materials for exploratory variables measured in this study).

Results

Manipulation check. To test whether participants perceived effort to increase across the six levels of our manipulation, we conducted simple contrasts between each level of effort. We found that perceived effort increased across effort levels 1–4, such that effort level 1 ($M = 3.68$, $SD = 1.63$, $CI95\%[3.45,3.90]$) was perceived as significantly less effortful than effort level 2 ($M = 5.53$, $SD = 1.30$, $CI95\%[5.34,5.71]$), $t(200) = 10$, $p < .001$; effort level 2 was perceived as significantly less effortful than

effort level 3 ($M = 6.47$, $SD = 0.97$, $CI95\%[6.34, 6.61]$, $t(200) = 10$, $p < .001$; and effort level 3 was perceived as significantly less effortful than effort level 4 ($M = 6.60$, $SD = 0.97$, $CI95\%[6.47, 6.74]$, $t(200) = 2$, $p = 0.05$). However, effort level 4 did not significantly differ from level 5 ($M = 6.58$, $SD = 1.05$, $CI95\%[6.44, 6.73]$, $t(200) = 0.40$, $p = 0.69$); nor did level 5 significantly differ from level 6 ($M = 6.57$, $SD = 1.12$, $CI95\%[6.41, 6.72]$, $t(200) = 0.26$, $p = 0.79$). In other words, the effort manipulation was successful across levels 1–4, but experienced a ceiling effect at levels 5 and 6. Given that we did not successfully manipulate prosocial effort at levels 5 and 6 as intended, we conducted two sets of analyses. Our main analysis includes all study conditions as originally planned. A follow-up analysis then excludes levels 5 and 6 to test our hypothesis across the successfully manipulated levels 1-4.

Moral character ratings. To evaluate the relationship between moral character and prosocial effort we built our regression model using the “lme4” R package (Bates, Machler, Bolker, & Walker, 2015) and we used the “lmerTest” package (Kuznetsova, Brockhoff, & Christensen, 2015) to calculate p-values. The model included a random intercept for participant to account for our repeated-measures design. We regressed moral character judgments on a linear and a quadratic term for effort level. The monotonic perspective would be supported by a significant linear effect of effort with a non-significant quadratic effect. The diminishing returns and backlash perspectives would be supported by a significant quadratic effect of effort. Follow-up contrasts to determine the shape of the quadratic effect and determine whether character judgments decrease at higher levels of effort would distinguish between the diminishing returns (no decrease at higher levels) and backlash (decrease at higher levels) perspectives.

Means, SDs, and 95% CIs are depicted in Table 1. Consistent with the monotonic perspective (and replicating Bigman & Tamir, 2016), we found a significant positive linear relationship between prosocial effort and moral character judgments [$b = 0.08$, $SE = 0.01$, $p < .001$]. However, consistent with both non-linear perspectives, we found a significant negative quadratic relationship between prosocial effort and moral character judgments [$b = -0.04$, $SE = 0.01$, $p < .001$]. We conducted planned contrasts to better understand the shape of the relationship. We found that moral character significantly increased from effort level 1 to effort level 2, $t(200) = 6$, $p < .001$. However, moral character did not significantly increase across any other effort level [effort level 2 vs. effort level 3, $t(200) = 1$, $p = 0.2$; effort level 3 vs. effort level 4, $t(200) = 1$, $p = 0.1$; effort level 4 vs. effort level 5, $t(200) = 1.72$, $p = .09$; and effort level 5 vs. effort level 6, $t(200) = .96$, $p = .34$]. The follow-up analysis on effort levels 1–4 (for which effort was successfully manipulated) yielded similar results. Prosocial effort had a significant linear [$b = 0.16$, $SE = 0.02$, $p < .001$] and quadratic [$b = -0.06$, $SE = 0.03$, $p = .02$] effect on moral character judgments.

	Moral Character		
	<u>Mean</u>	<u>SD</u>	<u>95% CI</u>
<u>Effort</u>			
Level 1	5.64	1.13	[5.49, 5.80]
Level 2	5.98	1.08	[5.83, 6.13]
Level 3	6.06	1.27	[5.89, 6.24]
Level 4	6.17	1.25	[5.99, 6.34]
Level 5	6.08	1.38	[5.89, 6.27]
Level 6	6.13	1.28	[5.95, 6.31]

Table 1.

Discussion

Study 1 was an initial test of the relationship between prosocial effort and moral character judgments. It was designed to test three perspectives. First, consistent with the monotonic perspective, our model found a positive relationship between prosocial effort and moral character judgments (c.f., Bigman & Tamir, 2016). However, this linear relationship was qualified by a significant quadratic effect. Specifically, moral character ratings increased with prosocial effort up to a point and then plateaued. That is, the moral character of prosocial actors who display some effort is perceived as higher than those who display minimal effort, but this relationship diminishes at higher levels of prosocial effort. Simple contrasts did not find evidence that moral character judgments decrease at higher levels of prosocial effort, speaking against the backlash perspective. Overall, this pattern is most consistent with the diminishing returns perspective.

One limitation of Study 1 is that our effort manipulation was not successful at levels 5 and 6, although effort levels 1–4 were successfully manipulated and were sufficient to test our hypothesis. We suspect that levels 5 and 6 suffered from a ceiling effect, such that the prior levels of effort were rated sufficiently high and there was little room for the rating to continue to increase. We designed Study 2 to address this issue.

Study 2

Study 2 was identical to Study 1 except that instead of presenting participants with the prosocial effort conditions from level 1 to level 6 (i.e., lowest effort to highest effort), we presented the conditions in reverse order, from level 6 to level 1 (i.e., highest effort to lowest effort). Asking participants to judge the effort level conditions from high to low removes the possibility of ceiling effects that we observed in Study 1.

Method

Participants. We recruited 104 students (59% female; $M_{\text{age}} = 19.20$, $SD_{\text{age}} = 1.44$) from a private research university in the Northeast. Participants all received course credit for participating. Sample size was limited to course enrollment.

Procedure. Participants followed the same procedure as in Study 1, with the exception that we presented participants with the scenarios in descending order according to effort. Participants read the vignettes from effort level 6 down to effort level 1.

Measures

We used the same measure of moral character ($r(104) = .66$) used in Study 1.

We also used the same effort manipulation check from Study 1.

Results

All measures were modeled and calculated in the same way as in Study 1.

Manipulation check. To test whether participants perceived effort to increase across the six levels of our manipulation, we conducted simple contrasts between each level of effort. We found that perceived effort increased across all effort levels, such that effort level 1 ($M = 3.41$, $SD = 1.39$, $CI95\%[3.14, 3.68]$) was perceived as significantly less effortful than effort level 2 ($M = 4.89$, $SD = 1.09$, $CI95\%[4.68, 5.11]$), $t(103) = 12.69$, $p < .001$; effort level 2 was perceived as significantly less effortful than effort level 3 ($M = 5.39$, $SD = 1.10$, $CI95\%[5.18, 5.61]$), $t(103) = 6.37$, $p < .001$; effort level 3 was perceived as significantly less effortful than effort level 4 ($M = 5.73$, $SD = 0.99$, $CI95\%[5.54, 5.92]$), $t(103) = 4.53$, $p < .001$; effort level 4 was perceived as significantly less effortful than effort level 5 ($M = 6.21$, $SD = 0.83$, $CI95\%[6.05, 6.37]$), $t(103) = 6.65$, $p < .001$; and effort level 5 was perceived as significantly less effortful than effort level 6 ($M = 6.78$, $SD = 0.59$, $CI95\%[6.66, 6.89]$), $t(103) = 7.74$, $p < .001$.

Moral character ratings. We regressed moral character judgments on the linear and quadratic effort level terms and a random intercept for participant. Means, SDs, and 95% CIs are depicted in Table 2. Consistent with the monotonic perspective, we found a significant positive linear relationship between effort and moral character judgments [$b = 0.09$, $SE = 0.02$, $p < .001$]. However, consistent with both non-linear perspectives, we found a significant negative quadratic relationship between effort and

moral character judgments [$b = -0.06, SE = 0.01, p < .001$]. We conducted planned contrasts to better understand the shape of the relationship. We found that moral character ratings at effort level 1 were significantly lower than effort level 2, $t(103) = 5.63, p < .001$. However, effort level 2 did not significantly differ from effort level 3, $t(103) = 0.08, p = 0.94$; effort level 3 did not differ significantly from effort level 4, $t(103) = 1.93, p = 0.06$; and effort level 4 did not significantly differ from level 5, $t(103) = 0.60, p = 0.55$. However, effort level 5 was significantly lower than effort level 6, suggesting that participants thought that the actor was less moral when exerting higher effort to bring about the prosocial outcome, $t(103) = 2.58, p = 0.01$.

	Moral Character		
	<u>Mean</u>	<u>SD</u>	<u>95% CI</u>
<u>Effort</u>			
Level 1	5.32	1.39	[5.05, 5.59]
Level 2	5.83	1.21	[5.59, 6.06]
Level 3	5.82	1.33	[5.56, 6.08]
Level 4	5.98	1.18	[5.75, 6.21]
Level 5	6.03	1.12	[5.81, 6.25]
Level 6	5.81	1.26	[5.57, 6.06]

Table 2.

Discussion

Study 2 tested our hypotheses using a reverse presentation order protocol that, as intended, eliminated the ceiling effect discovered in Study 1. The results provide additional support for the diminishing returns perspective. Moral character judgments

increase with prosocial effort and then plateau. It is notable that moral character ratings marginally decreased from effort level 5 to effort level 6, providing some evidence for the backlash perspective. However, this is the only instance across studies where we observe evidence of backlash, so we do not read too much into this result.

Study 3

Studies 1–2 found consistent evidence for the diminishing returns perspective. The goal of Study 3 was to test our hypothesis across different prosocial domains and to explore potential mechanisms. The prosocial domain from Studies 1 and 2 was replaced with four new prosocial domains. In addition, several variables were added to explore the potential mechanisms for the relationship between prosocial effort and moral character judgments: ulterior motives, social norms, and warmth.

Method

Participants. We recruited 805 participants (49% female, $M_{\text{age}} = 36.34$, $SD_{\text{age}} = 10.37$) via Amazon’s Mechanical Turk based on the 200 participants per cell recruiting heuristic applied in Study 1.

Procedure. In Study 3 we truncated the effort manipulation to three levels. The study design was a 3(effort level: lower, moderate, higher) x 4(prosocial domain: return lost wallet, assist elderly person, help person unconscious, help find a missing child) mixed design, where effort level was within-participants and prosocial domain was between-participants. Participants were told that they would read three brief scenarios and be asked to answer a few questions after each one. Participants were randomly assigned to one of four prosocial domains in which they read three scenarios

about a prosocial actor who administered low effort, moderate effort, and high effort to bring about a prosocial outcome. Participants read the scenarios in the order from low effort to high effort. Participants read about a prosocial actor who either administered effort to return a stranger's wallet, help find a missing child, help an elderly person with their groceries, or help an elderly woman who was unconscious in a parking lot (see Appendix B for the full text of all vignettes).

Effort manipulation. We simplified the effort manipulation to three levels. We designed the effort levels to roughly map onto levels one, two and five of the six-level manipulation from Studies 1 and 2. Participants read each of the three effort level scenarios in one of the four prosocial domains. After reading each scenario participants evaluated the same effort manipulation check from Studies 1–2.

Measures

Participants evaluated the prosocial actor's moral character ($r(805) = 0.66$), as in Study 1–2. Participants then responded to the effort manipulation check.

Next we asked participants to assess potential mechanisms. Participants evaluated the sociability of the prosocial actor by assessing to what extent the prosocial actor in the scenario was sociable and friendly, both on a 7-point Likert scale ($r(805) = 0.66$; scale adapted from Goodwin et al., 2014). Participants then evaluated to what extent they thought that the prosocial actor was motivated by ulterior motives and, as a measure of social norms, participants rated how much they thought that the prosocial actor should be administering as much effort as they did (both on 7-point Likert scales). Participants responded to these measures after each scenario. Finally, participants responded to demographic questions before receiving payment.

There were exploratory measures included that seemed potentially relevant, but we had no strong theoretical justification for including them. Measures of the prosocial actor's social distance and their dark traits can be found in the supplementary online materials.

Results

Prosocial domain did not interact with effort level in any of our analyses so we collapsed that factor. Given that the effort level predictor variable had three levels (versus six levels in Studies 1–2), we used a dummy contrast approach to test the effect of effort on moral character (versus the polynomial trend approach used in Studies 1–2) to prevent overfitting a model with a quadratic term. Two dummy coded variables were created where moderate effort (coded as 0) was the reference: low-to-moderate evaluates the relationship between low effort and moderate effort, and moderate-to-high evaluates the relationship between moderate effort and high effort. A random intercept for each participant was added into the model to account for the repeated measures design.

Manipulation check. Confirming our manipulation, perceived effort increased across all levels of effort, such that low effort ($M = 4.64$, $SD = 1.45$, $CI95\%[4.54, 4.74]$) was perceived as significantly less effortful than moderate effort ($M = 6.02$, $SD = 1.01$, $CI95\%[5.95, 6.09]$), $t(803) = 28.29$, $p < .001$; and moderate effort was perceived as significantly less effortful than high effort ($M = 6.63$, $SD = 0.82$, $CI95\%[6.57, 6.69]$), $t(802) = 18.11$, $p < .001$.

Moral Character ratings. We regressed moral character ratings on both the low-to-moderate and moderate-to-high dummy-coded variables of effort. Means, SDs,

and 95% CIs are depicted in Table 3. The model revealed a significant increase in moral character from low to moderate effort [$b = 0.17$, $SE = 0.03$, $p < .001$]. However, consistent with the diminishing returns perspective, the comparison of moderate to high effort was non-significant [$b = 0.02$, $SE = 0.03$, $p = .53$].

	Moral Character		
	Mean	SD	95% CI
<u>Effort</u>			
Low	6.05	.99	[5.98, 6.12]
Moderate	6.21	1.02	[6.14, 6.28]
High	6.23	1.14	[6.15, 6.31]

Table 3.

Mediation. We used the Preacher & Hayes (2004) method of mediation to examine the conditional indirect effects with bootstrapped confidence intervals and 5000 samples using the Lavaan package in R (Rosseel, 2012). We added a random intercept for each participant into the model, and used the model package’s—lme4—default Reduced Maximum Likelihood (REML) estimator for random effects. Below we first present the results from mediation that explain the increase in character from low effort to moderate effort, then we present the results explaining the tapering off of character from moderate effort to high effort.

To explain the increase in moral character from low effort to moderate effort, we found a significant indirect effect of sociability [indirect = $-.113$; CI: $-.143, -.084$; $p < .001$] such that sociability mediated the relationship between moral character and the change from low effort to moderate effort. We also found a significant indirect effect of social norms [indirect = $.031$; CI: $.015, .046$; $p < .001$] such that social norms

mediated the relationship between moral character and the change from low effort to moderate effort. Finally, we did not find a significant indirect effect of ulterior motives [indirect = $-.007$; CI: $-.019, .006$; $p = .31$], suggesting that perceptions of the actor's ulterior motives do not explain the relationship between moral character and the change from low effort to moderate effort.

To explain the tapering off of moral character from moderate effort to high effort, we found a significant suppression effect of sociability [indirect = $.039$; CI: $.011, .067$; $p = .01$] such that sociability suppressed the relationship between prosocial effort and moral character at moderate to high effort levels. We also found a significant suppression effect of social norms [indirect = $-.046$; CI: $-.068, -.025$; $p < .001$] such that social norms suppressed the relationship between moral character and the change from low effort to moderate effort. Finally, we found a significant indirect effect of ulterior motives [indirect = $-.027$; CI: $-.041, -.014$; $p < .001$], such that perceptions of the actor's ulterior motives suppressed the relationship between moral character and the change from moderate effort to high effort.

Discussion

We again found evidence in support of the diminishing returns perspective. Moral character increased from low to moderate levels of prosocial effort, but did not increase from moderate to high levels of prosocial effort. This tapering off of moral character judgments was explained by perceptions of the actor's sociability, ulterior motives, and social norms (i.e., perceptions of how much effort the actor should be administering in the situation). Specifically, moral character judgments of prosocial

actors seem to taper off at high levels of effort because they are constrained by perceptions of the actor's sociability, ulterior motives, and social norms.

Study 4

The goal of Study 4 was to provide a robust replication of the evidence in support of the diminishing returns perspective and the mechanisms that we discovered in Study 3. We made prosocial effort a between-subjects factor rather than a within-subjects factor to conduct this robust replication. The same prosocial domains from Study 3 were used. Study 4 was also designed to test an additional explanation for our mechanism story; that is, the diminishing returns perspective could be explained by perceptions of the actor's competence. Perhaps prosocial actors who put in so much effort are perceived as less competent because their actions appear inefficient (e.g., they could mail the wallet to the person rather than try and find the person whose wallet they found). We test this potential mechanism alongside the mechanisms from Study 3.

Method

Participants. We recruited 302 participants (53% female, $M_{\text{age}} = 37.45$, $SD_{\text{age}} = 11.60$) via Amazon's Mechanical Turk.

Procedure. Participants were randomly assigned to 1 of 3 effort conditions in which they read four scenarios about an actor who administered either low effort, moderate effort, or high effort to bring about a prosocial outcome. The same four prosocial scenarios from Study 3 were used, and the order in which they appeared was counterbalanced.

Effort manipulation. We used the same effort manipulation as in Study 3: low effort, moderate effort, and high effort. Participants evaluated the level of effort the actor administered to bring about the prosocial outcome after each prosocial scenario.

Measures

We used the same measure of moral character ($r(302) = 0.65$) as Studies 1–3. Perceptions of the actor’s ulterior motives, social norms, and sociability ($r(302) = 0.58$) were also measured. Perceptions of the actor’s competence was added by asking how competent and capable ($r(302) = 0.73$) the actor in the scenario was, both of which were measured on 7-point Likert scales (scale adapted from Goodwin et al., 2014).

We retained the social distance measure as an exploratory measure with no strong theoretical justification for adding, the results of which can be found in the supplementary online materials.

Results

The results are again averaged across the four prosocial domains like in Study 3 because the prosocial domain did not interact with our predictions. The results below do not control for prosocial domain, but the results remain the same when the control for prosocial domain is in the model.

Manipulation check. To test whether participants perceived effort to increase across all levels of our manipulation, we conducted simple contrasts between each level of effort. We found that perceived effort increased across all levels of effort, such that low effort ($M = 4.53, SD = 1.59, CI95\%[4.37, 4.70]$) was perceived as significantly less effortful than moderate effort ($M = 6.07, SD = 1.09, CI95\%[5.97,$

6.17]), $t(594) = 15.63, p < .001$; and moderate effort was perceived as significantly less effortful than high effort ($M = 6.48, SD = 0.81, CI95\%[6.40, 6.56]$), $t(846) = 6.36, p < .001$.

Moral Character ratings. We regressed moral character ratings on both the low-to-moderate and moderate-to-high dummy-coded variables of effort and a random intercept for participant. Means, SDs, and 95% CIs are depicted in Table 4. Consistent with the monotonic, diminishing returns, and backlash perspectives, there was a significant increase in moral character from low-to-moderate effort [$b = 0.36, SE = 0.10, p < .001$]. However, there was not a significant increase in moral character from moderate-to-high effort [$b = 0.02, SE = 0.10, p = .82$], which is consistent with the diminishing returns perspective and not the monotonic or backlash perspectives.

	Moral Character		
	Mean	SD	95% CI
<u>Effort</u>			
Low	5.95	1.01	[5.85, 6.06]
Moderate	6.36	.81	[6.28, 6.43]
High	6.36	.79	[6.28, 6.44]

Table 4.

Mediation. The same approach to mediation used in Study 3 was used here in Study 4.

To explain the increase in moral character from low effort to moderate effort, we found a significant indirect effect of sociability [indirect = $-.105$; CI: $-.138, -.072$; $p < .001$] such that sociability mediated the relationship between moral character and the change from low effort to moderate effort. We also found a significant indirect effect

of competence [indirect = $-.101$; CI: $-.136, -.067$; $p < .001$] such that competence mediated the relationship between moral character and the change from low effort to moderate effort. We also found a significant suppression effect of social norms [indirect = $.062$; CI: $.038, .087$; $p < .001$] such that social norms suppressed the relationship between moral character and the change from low effort to moderate effort. Finally, we found a significant suppressive effect of ulterior motives [indirect = $-.071$; CI: $-.106, -.036$; $p < .001$], suggesting that perceptions of the actor's ulterior motives suppressed the relationship between moral character and the change from low effort to moderate effort.

To explain the tapering off of moral character from moderate effort to high effort, we found a significant indirect effect of social norms [indirect = $-.138$; CI: $-.171, -.104$; $p < .001$] such that effort norms mediated the relationship between moral character and the change from moderate effort to high effort. We also found a significant suppression effect of ulterior motives [indirect = $-.059$; CI: $-.089, -.029$; $p < .001$], such that perceptions of the actor's ulterior motives suppressed the relationship between moral character and the change from moderate effort to high effort. Finally, we did not find a significant indirect effect of sociability [indirect = $-.019$; CI: $-.043, .005$; $p = .12$] or competence [indirect = $.004$; CI: $-.025, .033$; $p = .801$].

Discussion

We again found evidence for the diminishing returns perspective, but this time in a robust replication where effort was a between-subjects factor and prosocial domain was a within-subjects factor. We also found additional evidence that moral character judgments plateau at higher levels of prosocial effort because people

perceive the actor to be acting with ulterior motives. In addition, we ruled out competence as an alternative explanation to explain the plateau in moral character judgments. One limitation of Study 4 is that participants did not perceive the prosocial actor to be violating social norms at the highest level of prosocial effort, which is why it mediated the relationship between moderate and high prosocial effort, rather than suppress it like in Study 3. A second limitation is that there was no effect of sociability on the relationship between moderate and high prosocial effort, unlike in Study 3 where it played a suppressive role. We will return to these limitations below.

General Discussion

Across four studies we investigated the relationship between prosocial effort and moral character judgments. We sought to compare three competing perspectives in the literature that could have explained the relationship between prosocial effort and moral character judgments. The first perspective—monotonic perspective—builds on existing literature showing that people highly value effort (e.g., Bigman & Tamir, 2016; Norton et al., 2012), and claims that the relationship between prosocial effort and moral character judgments is positively monotonic: higher prosocial effort always leads to higher moral character judgments. The second perspective—diminishing returns perspective—builds on the notion that there can be too much of a good thing (Grant & Schwartz, 2011; Pierce & Aguinis, 2011), which leads people to see the prosocial actor as violating social norms and acting with ulterior motives, ultimately leading observers to stop rewarding the moral behavior. This perspective claims that moral character judgments increase from low to moderate effort, but then plateau. The third perspective—backlash perspective—advances the diminishing returns

perspective a step further suggesting that the violation of social norms may be so strong that observers experience moral self-threat. Additionally, they may see the actor's ulterior motives as harmful rather than neutral or merely selfish. This perspective claims that moral character judgments increase from low to moderate effort, but then decrease at higher levels of effort. Our work is the first work to systematically examine which three competing theoretical perspectives explains the relationship between prosocial effort and moral character judgments.

Our results provide support for the diminish returns perspective. All four studies revealed that an actor's moral character plateaued at higher prosocial effort: moral character increased from low to moderate prosocial effort, but plateaued. At this highest end of effort in Study 2 (level 5 to level 6), we find evidence for the backlash perspective. However, this is the only study in which this perspective came out, and moral character judgments were still in the domain of moral. The diminishing returns perspective appeared across five different prosocial domains where an actor helped a person whose car broke down, returned a stranger's missing wallet, helped a person who fainted in a parking lot, helped an elderly person carry their groceries home, and helped find a missing child.

We also investigated the mechanisms underlying this relationship, proposing that higher prosocial effort could violate social norms and make observers think that the actor possesses ulterior motives. In Study 3 we found that perceptions of the prosocial actor's sociability, the extent to which they violated social norms, and the extent to which they possessed ulterior motives explained the plateau at the higher level of prosocial effort. Specifically, these three variables had a suppressive effect on

the relationship, suggesting that these variables constrained a possible increase in moral character judgments from moderate to higher prosocial effort. In Study 4 where we attempted a between-subjects replication of the basic effect and mechanisms with a goal of ruling at competence as an alternative mechanism, we found again that ulterior motives had a suppressive effect on the prosocial effort plateau, meaning that perceptions of the actor's ulterior motives prevented an increase in moral character judgments. However, there are two inconsistencies: social norms mediated the lack of change in the relationship between moderate and high prosocial effort, and sociability had no effect. The inconsistent role that social norms played in explaining the relationship between moderate and high prosocial effort on moral character judgments can be explained by the difference in study design between Study 3 and Study 4. In Study 3, participants read about a prosocial actor who administered three different levels of prosocial effort within the same prosocial domain (i.e., the prosocial outcome was constant across scenarios). As a result, participants were able to use the context of different amounts of effort to inform their judgments of social norms around the amount of effort applied in the high prosocial effort scenarios, which led them to believe that social norms were violated at the higher level of prosocial effort. In Study 4, however, participants were not given different contexts for effort. Rather, they read about prosocial actors who applied the same level of prosocial effort in different prosocial domains. Thus, lacking examples of different levels of prosocial effort may have prevented participants from assessing whether or not prosocial actors administering high effort were violating social norms for effort. For sociability, the story is a bit different. Sociability between moderate and high prosocial effort looked

nearly identical between Study 3 and Study 4. However, Study 4 was slightly underpowered, which may explain why the indirect effect on moderate to high effort was not significant.

Implications for Theory

This research adds to the literature on effort by offering a qualification to the value of effort in everyday life. People tend to highly value effort, putting more monetary and artistic value in things created with more compared to less effort (e.g., Norton et al., 2012). In addition, effort is highly valued in the moral domain (e.g., Bigman & Tamir, 2016), such that effortful workers are seen as more honest and less likely to cheat (Amos, Zhang, & Read, 2019), and so-called “useless effort” is seen as virtuous (Celniker et al., 2020). The research reported here acknowledges how effort leads to higher moral character judgments, but suggests that moderate effort is enough to receive the most moral credit. In addition, the research evaluating perceptions of effortful actors has until now focused on comparisons between a little and a little bit more effort (Bigman & Tamir, 2016). The research reported here extends this literature by evaluating comparisons of multiple increases in effort, which is necessary to explore the topography of the relationship between effort and another variable (e.g., moral character).

This research also adds to the literature on prosocial behavior by evaluating how increases in immaterial forms of prosociality shape judgments of moral character. Previous research that varied the amount of prosocial behavior an actor administered has focused on monetary prosociality (e.g., Klein & Epley, 2014). The research here extends understanding of the relationship between prosocial effort and moral character

by examining how judgments of moral character are influenced by increases in immaterial prosociality.

Limitations and Future Directions

One limitation of these results is that the role of ulterior motives in explaining the relationship between prosocial effort and moral character judgments is ambiguous. That is, we do not know what sorts of ulterior motives people are thinking about when acknowledging that the high prosocial effort actor possesses ulterior motives. For instance, participants may have been thinking that the actor is just trying to look good, or that they want something in return from the stranger who they are helping. However, our theorizing suggests that observers who find the actor's ulterior motives harmful would derogate the actor's moral character, rather than merely stop rewarding it. Thus, the ulterior motives are likely neutral or non-harmful selfish motives, such as for future reciprocity. Future research should explore how different ulterior motives affect the relationship between prosocial effort and moral character judgments.

In addition, the demographic factors of the actor and the target of their prosociality were controlled. However, there is a large literature demonstrating biases in intergroup judgments (e.g., Tajfel, 1982), and biases in judgments of people perceived to belong to certain social categories (e.g., Fiske, Cuddy, Glick, & Yu, 2002). As such, the current findings are constrained in their generalizability (Simons, Shoda, & Lindsay, 2017), which has been noted recently as a concern for interpreting results in moral psychology (Hester & Gray, 2020; Schein, 2020). Future research should consider the potential moderating role of demographic factors for the

diminishing returns of prosocial effort on moral character, such as by varying the race or social class of actors in the situations.

Lastly, future research may explore how this relationship plays out within an organizational context. Research on organizational citizenship behaviors finds mixed results on how people are perceived for engaging in a high variety or a high number of organizational citizenship behaviors, contradicting the assumption that engaging in organizational citizenship behaviors is always a good thing (for review, see Bolino, Turnley, & Harvey, 2013). Thus, future research might seek to explain when and why people will be evaluated positively or negatively for their organizational citizenship behaviors. Moreover, future research might examine how much effort is required in helping a new employee to make an employee feel helped, and to receive the most amount of credit from supervisors.

Conclusion

The literature to date is focused on studying moral character. Many people feel time poor, and may worry that they cannot do enough to be a good person. Our work brings back Aristotle and reminds us that virtue is often found at a golden mean where some moderate amount is better than the bare minimum and the absolute maximum, and is often enough. In the domain of prosocial effort, when it comes to how one's moral character is perceived by others, it pays to go the extra mile, but one need not run a marathon.

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APPENDIX A

Effort lvl 1

Joseph is driving on the highway. He sees a car that stopped on the side of the road, with smoke coming out of the engine. He stops his car and a man approaches, saying that his car broke down, and he is in a hurry to get to an important meeting. If he is late, he might lose his job. It turns out that he needs to get to the same street as Joseph, so giving him the ride doesn't actually require any special effort on Joseph's side. Joseph agrees to give him a ride to work.

Effort lvl 2

Joseph is driving on the highway. He sees a car that stopped on the side of the road, with smoke coming out of the engine. He stops his car and a man approaches, saying that his car broke down, and he is in a hurry to get to an important meeting. If he is late, he might lose his job. It turns out that he needs to get to a different part of town than where Joseph is headed, so that giving him a ride makes Joseph's trip 30 minutes longer. Joseph agrees to give him a ride to work.

Effort lvl 3

Joseph is driving on the highway. He sees a car that stopped on the side of the road, with smoke coming out of the engine. He stops his car and a man approaches, saying that his car broke down, and he is in a hurry to get to an important meeting. If he is late, he might lose his job. It turns out that he needs to get to a different part of town than where Joseph is headed, so that giving him a ride makes Joseph's trip 2 hours longer. Joseph agrees to give him a ride to work.

Effort lvl 4

Joseph is driving on the highway. He sees a car that stopped on the side of the road, with smoke coming out of the engine. He stops his car and a man approaches, saying that his car broke down, and he is in a hurry to get to an important meeting. If he is late, he might lose his job. It turns out that he needs to get to a different part of town than where Joseph is headed, so that giving him a ride makes Joseph's trip 2 hours longer. Joseph agrees to give him a ride to work.

During the ride, Joseph discovers that the man has no way of getting home from work. Joseph remembers that he has a meeting later in the day, but decides to cancel the meeting and offer the man a ride home from work, despite the extra 2 hours that this will add to his evening commute. The man accepts the offer. Later that day Joseph cancels his meeting and gives the man a ride home from work.

Effort lvl 5

Joseph is driving on the highway. He sees a car that stopped on the side of the road, with smoke coming out of the engine. He stops his car and a man approaches, saying that his car broke down, and he is in a hurry to get to an important meeting. If he is late, he might lose his job. It turns out that he needs to get to a different part of town

than where Joseph is headed, so that giving him a ride makes Joseph's trip 2 hours longer. Joseph agrees to give him a ride to work.

During the ride, Joseph discovers that the man has no way of getting home from work. Joseph remembers that he has a meeting later in the day, but decides to cancel the meeting and offer the man a ride home from work, despite the extra 2 hours that this will add to his evening commute. The man accepts the offer. Later that day Joseph cancels his meeting and gives the man a ride home from work.

While giving the man a ride home from work Joseph learns during their conversation that the man will not be getting his car fixed until the next day. Joseph offers to give the man a ride to and from work until the man's car is fixed. The man accepts the offer. Joseph gives the man a ride to and from work the next day before the car is fixed.

Effort lvl 6

Joseph is driving on the highway. He sees a car that stopped on the side of the road, with smoke coming out of the engine. He stops his car and a man approaches, saying that his car broke down, and he is in a hurry to get to an important meeting. If he is late, he might lose his job. It turns out that he needs to get to a different part of town than where Joseph is headed, so that giving him a ride makes Joseph's trip 2 hours longer. Joseph agrees to give him a ride to work.

During the ride, Joseph discovers that the man has no way of getting home from work. Joseph remembers that he has a meeting later in the day, but decides to cancel the meeting and offer the man a ride home from work, despite the extra 2 hours that this will add to his evening commute. The man accepts the offer. Later that day Joseph cancels his meeting and gives the man a ride home from work.

Joseph picks up the man later in the day. Joseph learns during their conversation that the man will not be getting his car fixed for 7 days. Joseph offers to give the man a ride to and from work until the man's car is fixed. The man accepts the offer. Joseph gives the man a ride to and from work for the next 7 days before the car is fixed.

APPENDIX B

Vignette: Wallet

Low effort

Joseph is taking the bus to work in the morning. He notices that a man who just got up to get off the bus has accidentally left his wallet behind.

The man is still on the bus, so Joseph quickly picks up the wallet and returns it to the man before the man gets off the bus.

Moderate effort

Joseph is taking the bus to work in the morning. He notices that a man who just got up to get off the bus has accidentally left his wallet behind.

The man has already gotten off the bus, and the bus is about to leave the station. Joseph quickly picks up the wallet, gets off the bus, runs after the man and returns the wallet to him; he then catches the next bus.

High effort

Joseph is taking the bus to work in the morning. He notices that a man who just got up to get off the bus has accidentally left his wallet behind.

The man has already gotten off the bus, and the bus is about to leave the station. Joseph quickly picks up the wallet, gets off the bus, but is unable to find the man. The next day, Joseph returns to the bus station to find the man whose wallet he still has. He waits around the bus station for 2 hours, but the man does not show-up. Joseph repeats this routine the next day and the day after. On the morning of the third day, the man arrives and Joseph is able to return the wallet.

Vignette: Missing child

Low effort

Joseph is reading the news on his computer when he sees a missing person report. The alert suggests that the missing child was last seen in a neighborhood close to Joseph's house.

Joseph immediately logs-in to Facebook and shares the news to his Facebook friends, many of whom live in his neighborhood. A few days later, the missing child is discovered.

Moderate effort

Joseph is reading the news on his computer when he sees a missing person report. The alert suggests that the missing child was last seen in a neighborhood close to Joseph's house.

Joseph immediately logs-in to Facebook and shares the news to his Facebook friends, many of whom live in his neighborhood. He then spends 15 minutes knocking on all of the doors on his block to alert people to the situation. A few days later, the missing child is discovered.

High effort

Joseph is reading the news on his computer when he sees a missing person report. The alert suggests that the missing child was last seen in a neighborhood close to Joseph's house.

Joseph immediately logs-in to Facebook and shares the news to his Facebook friends, many of whom live in his neighborhood. He then spends 15 minutes knocking on all of the doors on his block to alert people to the situation.

Next, Joseph creates flyers of the child's face to hang around his neighborhood. He spends 2 hours canvassing his neighborhood with flyers of the child's face. He then maps out possible cities that the child may have been taken to by car since the alert. He spends 2 hours every day for the next 3 days to hang-up flyers all around the cities that the child may have been taken to. A few days later, the missing child is discovered.

Vignette: Groceries

Low effort

Joseph is walking back home from the supermarket when he sees an elderly woman struggling with her groceries. Joseph agrees to help the woman carry the bags to her apartment.

The bags are small and light and her apartment is on the way to his house.

Moderate effort

Joseph is walking back home from the supermarket when he sees an elderly woman struggling with her groceries. Joseph agrees to help the woman carry the bags to her apartment.

The bags are big and heavy and her apartment is 45 minutes out of the way from his house.

High effort

Joseph is walking back home from the supermarket when he sees an elderly woman struggling with her groceries. Joseph agrees to help the woman carry the bags to her apartment.

The bags are big and heavy and her apartment is 45 minutes out of the way from his house. Additionally, he offers to help the woman with her other errands. He ends up

picking up her laundry, driving her to her bingo night, and walking her to the grocery store to get more groceries for the next week.

Vignette: Woman fainting

Low effort

Joseph is walking out of the grocery store when he notices an elderly woman faint in front of him. He immediately calls 911 and waits for them to arrive. The woman is taken to the hospital where she is treated and recovers nicely.

Moderate effort

Joseph is walking out of the grocery store when he notices an elderly woman faint in front of him. He immediately calls 911 and waits for them to arrive.

Joseph is concerned about the woman's body temperature in the cold weather, so he and another person carefully lay the woman down in his car where she can stay warm before the ambulance arrives. Joseph goes back into the store to buy water for the woman and a heating blanket. The woman is taken to the hospital where she is treated and recovers nicely.

High effort

Joseph is walking out of the grocery store when he notices an elderly woman faint in front of him. He immediately calls 911 and waits for them to arrive.

Joseph is concerned about the woman's body temperature in the cold weather, so he and another person carefully lay the woman down in his car where she can stay warm before the ambulance arrives. Joseph goes back into the store to buy water for the woman and a heating blanket.

Joseph receives a call back from the 911 operator informing him that due to a multi-car accident, the ambulance will not be able to make it for a while. Joseph decides to drive 4 hours to bring the elderly woman to the closest hospital. Upon arriving, Joseph waits at the hospital to ensure that the woman is alright and can get home safely. He waits overnight at the hospital for 3 days before the woman is given a clean bill of health and discharged.