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Out of control!?! How loss of self-control influences prosocial behavior: The role of power  
and moral values.

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## Abstract

25  
26 Lack of self-control has been suggested to facilitate norm-transgressing behaviors because of  
27 the operation of automatic selfish impulses. Previous research, however, has shown that  
28 people having a high moral identity may not show such selfish impulses when their self-  
29 control resources are depleted. In the present research, we extended this effect to prosocial  
30 behavior. Moreover, we investigated the role of power in the interaction between moral  
31 identity and self-control depletion. More specifically, we expected that power facilitates the  
32 externalization of internal states, which implies that for people who feel powerful, rather than  
33 powerless, depletion decreases prosocial behavior especially for those low in moral identity.  
34 A laboratory experiment and a multisource field study supported our predictions. The present  
35 finding that the interaction between self-control depletion and moral identity is contingent  
36 upon people's level of power suggests that power may enable people to refrain from helping  
37 behavior. Moreover, the findings suggest that if organizations want to improve prosocial  
38 behaviors, it may be effective to situationally induce moral values in their employees.



64 depletion and low moral identity increases antisocial behavior [13,14]. However, in the  
65 present paper we argue that selfishness by showing antisocial behavior is inherently different  
66 from selfishness by refraining from prosocial behavior. We argue that people need power to  
67 feel that they can refrain from helping others. People who feel powerful are more inclined to  
68 disregard others [15,16] and therefore more likely to deviate from prevailing norms [17]. We  
69 thus expect that power is likely to be a facilitator of the selfish state resulting from the  
70 combination of depletion and low moral identity.

71 In the following sections, we will first develop our argument regarding the relevance  
72 of self-control for the display of voluntary prosocial behaviors and the role of internalized  
73 moral values in this process. We develop our reasoning using the influential strength model of  
74 self-control (see [18] for an overview). Internalized moral values are analyzed in terms of  
75 theorizing on moral identity [19-21]. Then, we will develop our argument regarding the  
76 critical moderating role of power in this process. This will result in a hypothesis regarding a  
77 three-way interaction effect of self-control, moral identity and employee power on voluntary  
78 prosocial behavior.

## 79 **Theoretical Background**

### 80 **Self-Control, Depletion, and Prosocial Behavior**

81 Self-control refers to an individual's ability to inhibit, override, or refrain from acting  
82 upon his/her impulses and desires [22-24]. The human capacity for self-control is extremely  
83 adaptive and enables people to follow society's norms and rules [24,25]. In line with this,  
84 research has shown that self-control failures may lead to various behavioral problems that can  
85 be harmful to people and to social collectives, such as depression, aggression, the inability to  
86 manage finances, and theft. Conversely, successful self-control has been linked to numerous  
87 positive outcomes such as success at work, increased concentration, and an improved ability  
88 to cope with stress and problems (see [18] for an overview).

89           Research on self-control failures suggests that the capacity for self-control is a limited  
90 resource, which, with repeated use, can become depleted [26]. When self-control resources  
91 are depleted, performance on subsequent acts that require self-control may be impaired  
92 [18,26]. Self-control failures are thus more likely to emerge when an individual performs  
93 multiple acts that require self-control without rest or replenishment [26,27].

94           Importantly, the limited resource model of self-control may also have implications for  
95 our understanding of prosocial behavior. Specifically, it has been argued that displaying  
96 prosocial behavior and avoiding antisocial behavior requires self-control to override selfish  
97 impulses [1]. Indirect support for this idea is found in laboratory research that focuses on  
98 antisocial behavior showing that after an initial act that required self-control, people were  
99 more likely to cheat [9,13] and to act aggressively [28]. Research focusing on prosocial  
100 behavior, however, is scarce, if non-existent. We know of only one paper that addressed this  
101 issue but mostly in terms of prosocial intentions: DeWall and colleagues [1] showed that  
102 depletion reduced participants' intention to help, but helping behavior was not included in the  
103 design. These findings suggest that people need self-control resources for prosocial behaviors  
104 to emerge. Interestingly, research suggests that having moral values (i.e., moral identity)  
105 facilitates the self-control of prosocial behavior [29]. That is, people with a high moral  
106 identity are more likely to have moral values readily accessible, even in situations that impair  
107 self-control. Below, we explicitly argue how moral identity may influence the self-regulation  
108 of prosocial behavior.

### 109 **Moral Identity**

110           Moral identity reflects the degree to which people consider being a moral person an  
111 important part of their self-concept [19,20]. Moral identity has been conceptualized as a  
112 cognitive representation or schema of moral values, goals, traits, and behavioral scripts  
113 [20,29]. For people high in moral identity, this moral self-schema is more readily accessible

114 and available for use than for people low in moral identity [20,30]. When activated, moral  
115 identity should have a strong influence on one's cognition and behavior, as individuals have a  
116 strong tendency for self-consistency [19,31].

117         Consequently, moral identity is an important predictor of prosocial behavior [21] and  
118 has been associated with increased levels of self-reported volunteering [19], ethical leader  
119 behavior [32], an increased likelihood of making a donation [19,33], and charitable giving  
120 [34]. Additionally, moral identity has been linked to decreased levels of selfish behavior, such  
121 as less lying in business negotiations [20], lowered aggression on the football field [35], and  
122 less antisocial behavior among adolescents [36].

123         Important for the present purposes, moral identity may also facilitate the self-  
124 regulation of prosocial behavior in situations that constrain the availability of self-regulatory  
125 resources (e.g., self-control depletion). As argued above, people with a high moral identity  
126 have more readily accessible moral values than people with a low moral identity [29].  
127         Consequently, people with a high moral identity should be especially likely to expend extra  
128 effort to self-regulate their prosocial behaviors. Over time, people with a high moral identity  
129 will thus more frequently implement prosocial behavior, resulting in more internalized and  
130 automatic enactment of prosocial behavior [12]. People with a high moral identity are thus  
131 likely to have their moral values more readily available, even in situations in which their self-  
132 control resources are depleted. We know of only two studies that offer some indirect support  
133 for this argument, but this support is offered in the realm of negative behavior. This research  
134 shows that depletion makes people low in moral identity more likely to show antisocial  
135 behavior, whereas this negative effect of depletion was absent among people high in moral  
136 identity [13,14]. In other words, the combination of depletion and a low level of moral  
137 identity represents a negative cocktail as evinced by the heightened levels of antisocial  
138 behavior.

139           However, findings obtained with negative behaviors cannot be straightforwardly  
140 extrapolated to (the non-display) of positive behavior. In philosophy, an important distinction  
141 is made between positive (i.e., do good for another) and negative duties (i.e., refraining from  
142 doing something morally bad; [37]). Importantly, Kant [38] argued that negative duties are  
143 more stringent than positive duties. In other words, refraining from negative behavior is  
144 considered more pressing than positive behavior, and therefore, negative behaviors are often  
145 regulated by state legislation [39]. Likewise, in organizations, refraining from antisocial and  
146 selfish behavior is regulated by formal sanction systems, whereas displaying prosocial  
147 behavior is often informal and more easy to implement because of its' social desirability.  
148 Admittedly, the display of prosocial behavior might sometimes be restrained by, for example,  
149 formal organizational rules and regulations [40] or by the demands that are inherent in  
150 employees' primary tasks [41]. However, helping others is often considered to be rewarding  
151 and these behaviors 'feel good' [42,43]. These behaviors are already stimulated at a young  
152 age [44]. Moreover, such behaviors are 'the right thing to do' and as such affirm one's  
153 morality (see [45]). Thus, these behaviors are mostly regulated by informal norms rather than  
154 by explicit sanctioning systems.

155           Variations in the display of antisocial and prosocial behavior can thus *not* be expected  
156 to be symmetrical. As such, selfishness by showing antisocial behavior is inherently different  
157 from selfishness by refraining from prosocial behavior. One can thus not straightforwardly  
158 extrapolate the effects of factors that influence the display of negative and antisocial  
159 behaviors toward the non-display of positive and prosocial behaviors. Hence, it remains to be  
160 seen whether the interaction effect between moral identity and depletion on antisocial  
161 behavior generalizes to the display of prosocial behavior. As we argue below, it is likely that  
162 power is a facilitator of the selfish state resulting from the combination of low moral identity

163 and depletion. In other words, it may be that people actually need power to feel that they can  
164 refrain from prosocial behavior.

### 165 **Power as an Inhibitor of Prosocial Behavior**

166 Power is typically defined as one's ability to administer and deny valuable resources  
167 or punishment to other people (e.g., [15,46,47]). Power is a central aspect of organizational  
168 contexts [48,49], and as such, can have a substantial impact on the emergence of selfish  
169 behaviors. Specifically, power has often been viewed as a corruptive force, influencing people  
170 to behave in self-interested ways [15,50-52]. A number of empirical studies have indeed  
171 suggested that people who experience power tend to focus on selfish impulses and  
172 subordinate the needs of others to their own desires (for overviews, see [15,16]). Moreover,  
173 the experience of power makes people less likely to empathize with someone else [53,54].  
174 People who experience power are also less influenced by others and less likely to conform to  
175 prevailing norms [17]. In sum, it seems that people who feel powerful are inclined to  
176 disregard others in their behavior.

177 More recent research, however, suggests that the relation between power and self-  
178 interested behavior may be more complex [15]. Rather than directly influencing behavior,  
179 power may instead amplify the behavioral expression of individual predispositions  
180 [48,51,55,56]. Wisse & Rus [57], for example, found that people who experienced power  
181 displayed more antisocial behavior when they focused on their personal self than when they  
182 focused on their social self.

183 The finding that power magnifies inherent impulses is interesting in the context of  
184 moral identity and self-control depletion. Because the combination of a low moral identity  
185 and self-control depletion has been reported to increase antisocial behavior and, as such, can  
186 be considered to represent a cocktail of selfishness, power should be expected to be a  
187 magnifying factor. As we argued before, it is not possible to simply translate results found in



188 the realm of negative behavior to positive behavior, and it therefore remains to be shown  
189 whether the combination of low moral identity and depletion leads to lower levels of prosocial  
190 behavior, or if power is a necessary facilitator of this effect. We expect the latter to be true for  
191 two reasons. First, prosocial behavior is usually displayed in high quality relationships such as  
192 workplace relationships. Power, however, may actually undermine this prevalence of  
193 prosocial behavior in high quality relationships. More specifically, power leads to an  
194 objectification of others, which transforms workplace relationships in exchange relationships,  
195 as such undermining prosocial behavior [56]. Second, while the display of positive behavior is  
196 enhanced by societal norms and education, high power undermines conformity [17], and  
197 therefore less helping behavior can be expected. In other words, people high in power may  
198 feel that they are in a position where they can get away with less helping behavior.

199         For people high in moral identity, on the other hand, depletion does not influence their  
200 level of selfishness as research suggests that high moral identifiers have their moral values  
201 more readily accessible even in situations of self-control depletion [13,14]. Because prosocial  
202 behavior is easy to implement and generally sustained by societal and organizational norms,  
203 we expect that people high in moral identity act in line with these societal norms irrespective  
204 of their level of depletion. In the same vein, one could also reason that power, as a facilitator  
205 of individual predispositions, may increase the prosocial behavior of people high in moral  
206 identity. Indeed, there is some research that indicates that people high in power who focus on  
207 moral or prosocial values show less antisocial behavior than those low in power [48,57].  
208 Prosocial behavior is -unlike antisocial behavior- relatively easy to implement and sustained  
209 by societal and organizational norms. We expect that because of this high social acceptance of  
210 most prosocial behaviors, power will not lead to more prosocial behavior for high moral  
211 identifiers. That is, we expect that prosocial behavior is already part of the daily routine for

212 people high in moral identity, and power is not likely to increase their helping behavior  
213 beyond this level.

#### 214 **Overview of Predictions and Studies**

215         There is reason to believe that self-control depletion undermines the emergence of  
216 prosocial behaviors. However, internalized moral values in terms of a high moral identity  
217 facilitate the self-regulation of prosocial behavior, even in situations that impair self-  
218 regulation. In other words, depletion is likely to make people low in moral identity less  
219 prosocial, whereas depletion should have no effect on people high in moral identity. In the  
220 present research we expect that - contrary to the negative effects of depletion and low moral  
221 identity on antisocial behavior - power is a facilitator of the negative combination of depletion  
222 and low moral identity on prosocial behavior. It is likely that people may need power to feel  
223 that they can get away with refraining from prosocial behavior. Hence, we expected that  
224 power facilitates the interaction effect of depletion and moral identity on prosocial behavior.  
225 This leads to our Hypothesis, which implies a three-way interaction between depletion, moral  
226 identity and power. In particular, when power levels are high, a combination of depletion and  
227 low moral identity lead people to refrain from prosocial behavior, whereas no such an effect is  
228 expected when power levels are low. The present study's Hypothesis therefore states that:

229         *The negative effect of depletion on prosocial behavior among people low in moral*  
230 *identity is restricted to people high, rather than low in power.*

231         We tested this Hypothesis in two studies. Study 1 was a controlled laboratory  
232 experiment in which participants' power and level of depletion were manipulated. We  
233 measured the participant's level of moral identity independent from the experimental  
234 situation. The dependent variable in this study was the extent to which the participants helped  
235 another person who was in need.

236 The controlled setting in Study 1 makes it possible to draw causal conclusions, but it  
237 does not tell us much about the relevance of the processes that we set out to study in actual  
238 organizational contexts. Therefore, Study 2 was conducted in an organizational setting, using  
239 a multisource design. We asked employees of various organizations to indicate their level of  
240 depletion, their moral identity, and their power in the organization using well-established  
241 measures. To avoid potential common method and self-presentation biases [58] we asked a  
242 colleague to indicate the focal employee's level of prosocial behavior. We operationalized  
243 prosocial behavior as organizational citizenship behavior (OCB). OCB is an important and  
244 commonly used index of prosocial employee behavior because it describes various types of  
245 discretionary, extra-role behaviors that contribute to effective organizational functioning but  
246 that are not explicitly required [59].

## 247 Study 1

### 248 Method

249 **Ethics statement.** Ethics approval for Study 1 was formally waived by the ethical  
250 committee of the Faculty of Psychological and Educational Sciences (FPPW), Ghent  
251 University, as this research was performed in adherence with the ethical protocol of the  
252 university. All participants gave their formal, written consent, and were fully debriefed after  
253 the experiment. Participants participated voluntarily and they could quit the experiment at any  
254 time without negative consequences. All data was analyzed and stored anonymously.

255 **Participants and design.** Eighty-four undergraduate students<sup>1</sup> from a medium-sized  
256 Belgian university participated in this study. The average age of participants was 18.95 years  
257 ( $SD = 2.11$ ), and 89.3 percent were women. The participants were recruited through an online  
258 sign-up system and received partial course credit for their participation. Participants were  
259 randomly assigned to one condition of a 2 (depletion versus no depletion) x 2 (high versus

260 low power) between subjects design. Participants' moral identity was assessed prior to the  
261 experimental manipulations, creating an additional continuous between subjects variable.

262 **Moral identity measure.** Participants responded to an online questionnaire including  
263 demographic information and a measure of moral identity 24 hours before the actual  
264 experiment. We used Aquino and Reed's [19] instrument to measure participants' moral  
265 identity. Following Aquino and Reed [19], and in line with our theoretical ideas, we relied on  
266 the Internalization dimension of this instrument (i.e., the extent to which people find morality  
267 an important aspect of who they are) and disregarded the Symbolization subscale (which  
268 measures the extent to which people want to appear as a moral person). The Internalization  
269 subscale has been proven to be the most stable and robust predictor of moral behavior [29,34].  
270 In line with Aquino and Reed's [19] procedure, the following instructions were given: "Listed  
271 below are some characteristics that might describe a person: Caring, Compassionate, Fair,  
272 Friendly, Generous, Helpful, Hardworking, Honest, and Kind. The person with these  
273 characteristics could be you or it could be someone else. For a moment, visualize in your  
274 mind the kind of person who has these characteristics. Imagine how that person would think,  
275 feel, and act. When you have a clear image of what this person would be like, answer the  
276 following questions." Participants then responded to the five Internalization items on a 7-point  
277 scale. Sample items from this scale are: "It would make me feel good to be a person who has  
278 these characteristics" and "Having these characteristics is an important part of my sense of  
279 self" (1 = *totally disagree*; 7 = *totally agree*; Cronbach's  $\alpha = .72$ ;  $M = 6.18$ ,  $SD = 0.60$ ).

280 **Experimental procedure.** Upon arrival at the laboratory, participants were seated in  
281 separate cubicles, each equipped with a personal computer. All communication took place via  
282 this computer.

283 First, participants were introduced to the power manipulation, taken from Galinsky  
284 and colleagues [51] that served to prime high versus low power. Participants were asked to

285 recall a particular situation in their lives. Participants in the high power condition wrote about  
286 “a particular situation in which you had power over another individual or individuals”.  
287 Participants in the low power condition wrote about “a particular situation in which someone  
288 else had power over you.”

289         Following the power manipulation, participants responded to the manipulation checks  
290 using two items (adapted from [60]): “How powerful did you feel in the situation you  
291 recalled” and “How much power did someone else have over you in the situation you  
292 recalled” (reversed; 1 = *not at all*; 7 = *very much so*).

293         Participants then completed the depletion task (taken from Baumeister et al., 1998).  
294 This task has proven to be successful as a manipulation of self-control depletion in a number  
295 of studies (e.g., [26,61,62]). In the first part, participants were instructed to indicate each  
296 instance of the letter *e* in a text (i.e., by clicking each *e* with the computer mouse). Participants  
297 received visual feedback whenever they clicked an *e* (i.e., a highlighted circle around the  
298 corresponding *e*), and were given five minutes to complete the task. This first phase is  
299 relatively easy and is used to establish a strong habitual response for scanning and indicating  
300 every *e*. In the second part of the task, participants either continued indicating *e*’s using the  
301 same rule as before (*no depletion* condition), or they were given the instruction to indicate  
302 each *e*, except for the ones followed by a vowel, or those with a vowel preceding the *e* by two  
303 letters (*high depletion* condition). For participants in the high depletion condition, overriding  
304 the response of scanning for and indicating every *e* is known to require more regulatory  
305 resources than for participants in the low depletion condition (who did not need to override a  
306 habitual response).

307         The effectiveness of the self-control depletion manipulation was assessed using two  
308 items: “The second task was hard” (taken from [63]), and “The second task was habit-  
309 breaking” (1 = *not at all*; 7 = *very much so*; taken from [1]).

310           **Helping measure.** After the experimental tasks, participants were told that there were  
311 several PhD students in need of participants for their experiments that lasted usually  
312 somewhere between 5 and 60 minutes. Participants were asked whether they would be willing  
313 to participate. We emphasized to the participants that it was not possible to reward them for  
314 their participation in these additional studies, and that they would be contacted by an  
315 experimenter to set a date and time that would suit them best. Then, participants indicated  
316 how much time they would help (i.e., number of donated minutes) or by indicating that they  
317 would not help (coded as 0 donated minutes; see e.g., [64,65] for similar ways to measure  
318 prosocial behavior). Subsequently, participants were fully debriefed.

### 319 **Results**

320           **Manipulation checks.** A 2 (depletion versus no depletion) x 2 (high power versus low  
321 power) Analysis of Variance (ANOVA) showed that participants in the high power condition  
322 considered themselves more powerful in the recalled situation than participants in the low  
323 power condition ( $M = 4.81, SD = 1.40$  vs.  $M = 2.14, SD = 1.00$ , respectively),  $F(1, 80) =$   
324  $99.24, p < .001, \eta^2 = .55$ . These participants also disagreed more with the statement that  
325 someone else had power over them than participants in the low power condition ( $M = 4.55,$   
326  $SD = 1.23$  vs.  $M = 5.29, SD = 1.15$ , respectively),  $F(1, 80) = 8.17, p = .01, \eta^2 = .09$ . No other  
327 main or interaction effects were significant.

328           Additionally, two independent judges rated how powerful the participants were in the  
329 recalled situations on a 7-point scale (1 = *not at all powerful*; 7 = *very powerful*). The inter-  
330 rater reliability was high (Intraclass correlation coefficient [ICC] = .90) and ratings were  
331 averaged to assess the effectiveness of the power manipulation. A 2 (depletion versus no  
332 depletion) x 2 (high versus low power) ANOVA showed that participants in the high power  
333 condition were rated more powerful in the described situation than participants in the low

334 power condition ( $M = 4.85$ ,  $SD = 0.58$  vs.  $M = 3.20$ ,  $SD = 0.90$ , respectively),  $F(1, 80) =$   
335  $99.34$ ,  $p < .001$ ,  $\eta^2 = .55$ . No other main or interaction effects were significant.

336 A 2 (depletion versus no depletion) x 2 (high versus low power) ANOVA indicated  
337 that depleted participants rated the depletion task as harder than non-depleted participants ( $M$   
338  $= 4.88$ ,  $SD = 1.33$  vs.  $M = 3.60$ ,  $SD = 1.50$ , respectively),  $F(1, 80) = 17.62$ ,  $p < .001$ ,  $\eta^2 = .18$ .  
339 These participants also found the task more habit-breaking than non-depleted participants ( $M$   
340  $= 5.05$ ,  $SD = 1.38$  vs.  $M = 3.95$ ,  $SD = 1.46$ , respectively),  $F(1, 80) = 12.40$ ,  $p = .001$ ,  $\eta^2 = .13$ .  
341 No other main or interaction effects were significant.<sup>2</sup>

342 **Helping behavior.** Our measure of helping behavior (i.e., asking participants to  
343 donate their time for participation in additional studies) was positively skewed ( $M = 21.31$ ,  
344  $SD = 16.79$ ). This resulted because a significant number of cases ( $N = 16$ ) clustered at the  
345 lower limit (i.e., helping out for 0 minutes, to indicate that they did not want to display  
346 prosocial behavior). Skewed distributions can result in the violation of OLS assumptions. We  
347 therefore conducted a Tobit regression (see [66]), which was specifically developed for  
348 variables with a lower (or upper) limit and a concentration of observations at this limiting  
349 value.

350 To test our hypothesis, we thus conducted a Tobit regression analysis<sup>3</sup> in which  
351 helping behavior was predicted by the depletion manipulation, moral identity, the power  
352 manipulation, all the two-way interactions among these three variables, and finally, the three-  
353 way interaction. Following Aiken and West [67], the interaction terms were based on the  
354 mean-centered scores of moral identity and effect coded scores of depletion and power.

355 Table 1 shows the results of the Tobit regression analysis. Of most importance, the  
356 predicted three-way interaction was significant,  $\beta = .34$ ,  $p = .004$ . To analyze this interaction  
357 in more detail, we used simple slope analyses [67]. Figure 1a shows that, consistent with our  
358 predictions, among participants who were primed with high power, depletion significantly

359 decreased helping behavior for those low in moral identity (one *SD* below the mean),  $\beta = -.55$ ,  
360  $p = .02$ , but not for those high in moral identity (one *SD* above the mean),  $\beta = .21$ ,  $p = .33$ .

361 Yet, for participants who received the low power prime (see Figure 1b), depletion did  
362 not significantly influence helping behavior for those low in moral identity (one *SD* below the  
363 mean),  $\beta = .35$ ,  $p = .09$ , or for those high in moral identity (one *SD* above the mean),  $\beta = -.26$ ,  
364  $p = .24$ .

### 365 **Summary and Conclusion**

366 The results of Study 1 show that, in line with theoretical predictions [12] and our  
367 Hypothesis, among participants who felt high in power, depletion reduced prosocial behaviors  
368 for those low (as opposed to high) in moral identity, whereas this interaction effect between  
369 depletion and moral identity did not occur for those who felt low in power.

### 370 **Study 2**

371 Study 1 provided causal evidence for our proposed ideas, but the setup limited us to  
372 the use of students as participants in a laboratory setting. Study 2 was designed to test our  
373 predictions in an organizational setting. Rather than priming power and manipulating  
374 depletion, we measured employees' sense of power in the organization and their level of  
375 depletion in addition to their moral identity. To avoid potential common method and self-  
376 presentation biases we asked colleagues of the respondents to rate the respondent's prosocial  
377 behavior [58].

### 378 **Method**

379 **Ethics statement.** Ethics approval for Study 2 was formally waived by the ethical  
380 committee of the FPPW, Ghent University, as this research was performed in adherence with  
381 the ethical protocol of the university. We used a research agency to recruit our respondents,  
382 who gave their consent upon enrolling this research panel to use their data for research  
383 purposes. Moreover, a "double active opt-in" method was used, meaning that all respondents



384 gave their consent by actively and voluntarily agreeing to take part in our research. Before  
385 starting the questionnaire, all respondents were provided with information on the purpose and  
386 the content of the research. Respondents were informed that all data would be analyzed and  
387 stored anonymously and that they could quit the questionnaire at any moment.

388       **Sample and procedure.** We recruited respondents via a Dutch research panel. We  
389 asked potential respondents to respond to our survey and also to invite a coworker to respond  
390 to some items. A total of 893 panel members agreed to fill out the questionnaire as focal  
391 employee and 94 of these focal employees also found a colleague willing to fill out the  
392 questionnaire. The focal employees (i.e., panel members) received credit points that would  
393 allow them to receive certain gifts (e.g., tickets for the movies). Colleagues participated in a  
394 lottery in which they could win an Ipad or one of five €20 gift certificates. Because we relied  
395 on colleague ratings of the focal employee's behavior, the number of respondents included in  
396 our analyses consisted of 94 employees and 94 matched colleagues.<sup>4</sup>

397       Of the focal employees, 55 were male and 39 were female. The mean age was 44.13  
398 years ( $SD = 11.37$ ). One percent had only lower education (primary school), 17% had high  
399 school only, 26% had followed up on this with vocational education, 36% had a bachelor's  
400 degree, and 20% had a master's degree. The focal employees worked on average for 12.83  
401 years ( $SD = 10.80$ ) in their current organization.

402       The matched group of colleagues included 47 males and 47 females. The mean age  
403 was 42.96 years ( $SD = 10.98$ ). One percent had only lower education (primary school), 19%  
404 had high school only, 30% had followed up on this with vocational education, 43% had a  
405 bachelor's degree, and 7% had a master's degree. The colleagues worked on average for  
406 10.72 years ( $SD = 9.27$ ) in their current organization.

407           **Measures.** We measured moral identity using the same internalization subscale of the  
408 moral identity measure [19] as in Study 1 (1 = *not at all*; 5 = *very much so*; Cronbach's  $\alpha$  =  
409 .77;  $M = 4.02$ ,  $SD = 0.70$ ).

410           To assess focal employees' levels of depletion, we used the 2-item measure from  
411 Muraven and colleagues [27]. Focal employees indicated how much they agreed or disagreed  
412 with: "I often feel as if I have low energy," and "I often feel as if things are taking a lot of  
413 effort" (1 = *strongly disagree*; 5 = *strongly agree*; Cronbach's  $\alpha = .72$ ;  $M = 2.29$ ,  $SD = 0.93$ ).

414           Power of the focal employee was measured using the 8-item instrument developed by  
415 Anderson and Galinsky ([50]; see [68] for extensive validation evidence). Focal employees  
416 responded to items such as "Even if I voice them, my views have little sway in the  
417 organization" (reverse scored), and "If I want to, I get to make the decisions in the  
418 organization" (1 = *strongly disagree*; 5 = *strongly agree*; Cronbach's  $\alpha = .77$ ;  $M = 3.51$ ,  $SD =$   
419 0.89).

420           We operationalized prosocial behavior of the focal employee using the 19-item OCB  
421 measure of Moorman and Blakely [69]. To assess OCB, *colleagues* of the focal employees  
422 were asked to rate the focal employees on actions such as "voluntarily helps new employees  
423 settle into the job," "often motivates others to express their ideas and opinions", "performs  
424 his/her job duties with extra-special care," and "actively promotes the organization's products  
425 and services to potential users" (1 = *strongly disagree*; 5 = *strongly agree*; Cronbach's  $\alpha =$   
426 .91;  $M = 3.87$ ,  $SD = 0.52$ ).

## 427 **Results**

428           **Descriptive statistics and intercorrelations.** Table 2 presents the means, standard  
429 deviations, and correlations between the Study 2 variables.

430           **Hypothesis test.** To test our hypothesis, we conducted a hierarchical regression  
431 analysis with colleague ratings of OCB serving as the dependent variable. Age, gender,

432 tenure, and education level of the focal employees, and, age, gender, and education level of  
433 the colleagues were entered as control variables in the first step of the regression. Depletion,  
434 moral identity, and power were entered in the second step of the regression. The two-way  
435 interactions between depletion, moral identity, and power were entered in the third step of the  
436 regression. The three-way interaction was entered in the fourth step. Interaction terms were  
437 based on mean-centered scores of the independent variables [67].

438 Table 3 shows the results of the hierarchical regression analysis. Of most importance  
439 and in line with our Hypothesis, the predicted three-way interaction was significant,  $\beta = .24$ ,  $p$   
440  $= .02$ . We used simple slope analyses [67] to analyze this interaction further. Figure 2a shows  
441 that, among high power employees, depletion significantly decreased OCB for those low in  
442 moral identity (one *SD* below the mean),  $\beta = -.95$ ,  $p < .001$ . However, for those high in moral  
443 identity (one *SD* above the mean) depletion did not decrease OCB,  $\beta = .17$ ,  $p = .35$ .

444 Figure 2b shows that, for low power employees, depletion had no effect on OCB for  
445 those low in moral identity (one *SD* below the mean),  $\beta = .02$ ,  $p = .89$ . Unexpectedly,  
446 depletion increased OCB for those high in moral identity (one *SD* above the mean),  $\beta = .41$ ,  $p$   
447  $= .050$ . However, given the fact that the interaction between moral identity and self-control  
448 depletion was not significant among employees low in power, and given that we did not  
449 obtain this result in Study 1, the results of this analysis should be interpreted with caution.

450 **Supplemental analyses.** We followed Spector and Brannick's [70] suggestion and  
451 repeated our analyses without the control variables as predictors in the equations. This  
452 analysis led to similar conclusions to those presented previously. Most importantly, the  
453 predicted three-way interaction was significant,  $\beta = .24$ ,  $p = .02$ .

#### 454 **Summary and Conclusion**

455 The results of Study 2 supported our prediction. We found the hypothesized  
456 interaction between moral identity and depletion for employees high in power, but not for

457 employees low in power. More specifically, depletion reduces prosocial behaviors among  
458 employees low in moral identity if those employees feel high in power, but not if they feel  
459 low in power. The prosocial behavior of employees high in moral identity, on the other hand,  
460 was not influenced by depletion, whether they felt high in power or not. It thus seems that  
461 employees with a high moral identity have their moral values more readily accessible, even  
462 when their self-control resources are depleted and irrespective of their power level.

### 463 **General Discussion**

464 A laboratory experiment and a multisource field study consistently showed an  
465 interaction between depletion and moral identity for people high in power, but not for people  
466 low in power. In the following sections we discuss the implications and limitations of these  
467 findings.

### 468 **Theoretical Implications**

469 The obtained three way interaction between self-control depletion, moral identity and  
470 power has theoretical implications for each of the constituting factors of this third order effect.  
471 It enhances, first of all, our understanding of the role of self-regulation in the display of  
472 prosocial behavior. In fact, most previous studies focused on effects of depletion on  
473 subsequent task persistence or negative and antisocial behavior [13,28,71]. To date, indirect  
474 evidence for the effect of depletion on prosocial behavior is offered only by DeWall and  
475 colleagues [1] who showed that depletion decreases prosocial *intentions*. Hence, our research  
476 is (at least to our knowledge) the first to show that regulatory depletion has an effect on  
477 prosocial *behavior*. These findings are important because our results indicate that especially  
478 people who feel powerful and are low in moral identity are likely to show less prosocial  
479 behavior as a result of regulatory depletion. At the same time, however, people high in power  
480 are likely to serve as a source of ethical guidance by means of social learning [72,73]. That is,

481 if someone in power does not act in ethical ways, employees are likely to follow his or her  
482 lead [74].

483 Most importantly, the present findings offer corroborative evidence for the idea that  
484 the effect of situations that constrain cognitive capacity (e.g., self-control depletion) on  
485 prosocial behavior depends not only on one's level of moral identity, but also on one's sense  
486 of power. That is, self-control depletion leads to a decrease in prosocial behavior among  
487 people low in moral identity, but only when they feel powerful. Our reasoning for this is that  
488 prosocial behavior is fairly easy to implement because of its social desirability and it thus  
489 seems that people need power to feel that they can refrain from prosocial behavior. Research  
490 in the realm of antisocial behavior, however, has shown that the effect of self-control  
491 depletion on antisocial behavior depends solely on one's level of moral identity [13,14]. That  
492 is, depletion increases antisocial behavior among people low in moral identity, irrespective of  
493 their power level. The self-regulation of prosocial behavior, on the other hand, is dependent  
494 upon people's level of power. In other words, depletion reduces prosocial behavior among  
495 people low in moral identity, only if they experience power. Taking all these results together,  
496 it is clear that the display of prosocial intentions relies on processes that are qualitatively  
497 different from suppressing antisocial and selfish impulses (e.g., [75]).

498 The results of the present study also have implications for our understanding of what  
499 power tells us about the differences between not helping someone and hurting someone. In the  
500 introduction we argued that refraining from antisocial behavior is considered as more pressing  
501 than prosocial behavior [38]. That is, antisocial behavior is usually regulated by formal  
502 sanctioning systems, which are known to make people focus on the exchange characteristics  
503 of a situation [76,77]. Similarly, power is also likely to make people focus on the exchange  
504 characteristics of a situation, because people who experience power tend to objectify others  
505 [56]. It thus seems that similar processes that underlie the emergence of antisocial behavior,

506 also play a role in the behavior of people high in power. Prosocial behavior, on the other  
507 hand, is regulated more informally because of its social desirability. Prosocial behavior is  
508 generally sustained by social and organizational norms, and adherence to these norms is fairly  
509 easy. The present study thus indicates that power is needed to obtain the same results for  
510 prosocial behavior as for antisocial behavior (i.e., the negative effect of self-control depletion  
511 for people low in moral identity; see [13,14]).

512 Our findings are also informative for the study of moral identity. Among people high  
513 in moral identity, self-control depletion and power do not necessarily hamper the self-  
514 regulation of prosocial behavior. This finding suggests that, in line with Gino and colleagues  
515 [13] and Joosten and colleagues [14], people high in moral identity have their moral values  
516 accessible irrespective of their level of depletion.

517 Our research has also some implications that are relevant for the power literature. Past  
518 research has, on the one hand, often shown that power can make people more selfish (for  
519 overviews see [15,16]). However, on the other hand, some studies suggest that this  
520 undermining effect on selfishness does not necessary result from having high power in itself  
521 [15,51]. As a solution to these diverging findings, it has been proposed that power in itself  
522 does not make people selfish but that it acts as a catalyst in facilitating the behavioral  
523 expression of internal states [60,78]. This indicates that power is not inherently corruptive, but  
524 rather a facilitator of the behavioral expression of internal states (in our case: the toxic  
525 cocktail of depletion and low moral identity). The present research adds to this literature,  
526 showing that the facilitating effect of power on internal states (i.e., low moral identity) is  
527 contingent upon third variables as well (i.e., self-control depletion).

### 528 **Practical Implications**

529 The present research also offers some practical implications for organizations. It seems  
530 to be the case that particularly employees who feel powerful are vulnerable to the effects of

531 self-control depletion on prosocial behaviors. At the same time, it is especially important for  
532 employees high in power to behave in prosocial ways as they form an important source of  
533 vicarious learning [73]. For these employees, the negative effects of self-control depletion on  
534 prosocial behavior seem to apply particularly among those low in moral identity. Fortunately,  
535 research indicates that it is possible to situationally increase the accessibility of moral identity  
536 [29,79]. Combined with the present results, this entails a promising implication for  
537 organizations. Situational interventions aimed at stimulating moral identity are thus likely to  
538 make employees who feel high in power behave in prosocial ways. Such interventions can  
539 consist of the stimulation of a clear ethical climate. Moreover, social learning is enforced by  
540 ensuring that employees high in power act in moral ways, by which interventions aimed at  
541 increasing morality have positive implications for people low in power [74,80,81].

542 Another practical implication of the present findings is that on the one hand, high  
543 power makes employees particularly vulnerable to the effects of self-control depletion on  
544 prosocial behaviors, while, on the other hand, power also comes with heavy workloads, and  
545 numerous choices and decisions each day. Importantly, high stress levels [7], overly long  
546 working hours that may lead to sleep deprivation [5,6], and the necessity to make many  
547 choices and decisions [4], all constitute factors that are known to lead to self-control  
548 depletion. Organizations should thus be aware that overloading their employees in this respect  
549 could also reduce the prevalence of prosocial behaviors, at least among employees with a low  
550 moral identity and a high sense of power. Similarly, employees who feel high in power should  
551 also be aware that their cognitive state could affect their own behavior.

552 One could assume from our results that employees who feel low in power are not  
553 vulnerable to the effects of self-control depletion on selfish behaviors. It is, however,  
554 important that organizations and employees realize that this only holds for the emergence of  
555 prosocial behaviors. That is, our findings indicate that for employees low in power, depletion

556 does not reduce prosocial behaviors for those low in moral identity. There are, however,  
557 studies in the realm of negative behavior that show that self-control depletion makes people  
558 low in moral identity more likely to show antisocial behavior [13,14]. Even though these  
559 studies did not compare high and low power, the results from these studies should  
560 nevertheless be taken into consideration.

### 561 **Strengths, Limitations and Suggestions for Future Research**

562 A major strength of this article lies in the use of diverse methods to test our  
563 hypothesis. The laboratory experiment (Study 1) permits us to draw causal inferences with  
564 regard to the interactive effects of power, self-control depletion and moral identity on  
565 prosocial behavior. The subsequent multisource field study (Study 2) allowed us to investigate  
566 whether the hypothesized effects are also relevant in organizational settings. Furthermore, the  
567 multisource setting made it possible to control for common method and self-presentation  
568 biases [58].

569 A potential limitation is that the sample sizes in both Study 1 and Study 2 are  
570 relatively small and that this could potentially harm the validity of our results. We did,  
571 however, replicate the findings in an experimental setting (Study 1) and in a multisource field  
572 setting (Study 2), which reinforces the reliability and validity of our results. However, even  
573 though we believe that our results are valid and reliable, replications are necessary to further  
574 prove the validity of our findings.

575 In Study 2, we relied on colleague ratings of OCB. Our reliance on a single source to  
576 measure OCB may pose a threat to the validity of our findings, because of the discretionary  
577 nature of OCB [82]. That is, OCB consists of many different behaviors, and it is not unlikely  
578 that the colleagues witnessed only part of these behaviors. It may thus be that our reliance on  
579 a single source measure does not fully capture the unique variance present in citizenship  
580 behaviors. Future research could address this possible shortcoming by measuring OCB via



581 various sources (e.g., comparing self and other ratings, or by combining various other  
582 ratings).

583 Another strength of the present article is that self-control depletion was manipulated in  
584 Study 1, whereas it was measured in Study 2. Although it can be argued that the manipulation  
585 of self-control depletion represents a more dynamic representation of self-control depletion  
586 than the more trait oriented measure, similar results were obtained. This apparent consistency  
587 strengthens our beliefs that it is possible to capture self-control depletion with a trait oriented  
588 measure in the field. These results also corroborate previous research that combined self-  
589 control depletion manipulations and measures, which shows clear consistency between these  
590 two operationalizations of self-control depletion [4,14]

591 Readers could wonder whether there are situations in which power may increase the  
592 prosocial behavior of people high in moral identity. In our research we focused on informal,  
593 effortless helping behavior. As noted in the introduction, prosocial behavior might sometimes  
594 be restrained by organizational rules and regulations or by demands inherent in employees'  
595 primary tasks [40,41]. In these cases, prosocial behavior is thus likely to be more effortful and  
596 less socially desirable, and may have as a result that high moral identifiers need power to act  
597 in line with their moral values.

### 598 **Concluding Remarks**

599 Research focusing on the social effects of depletion presents us with a rather cynical  
600 view of human nature. Lack of self-control results in selfishness [8-10], and is also likely to  
601 undermine the emergence of prosocial behaviors. Yet, other studies show that depletion  
602 makes only people low in moral identity more selfish, while no such an effect of depletion  
603 was obtained among high moral identifiers. We argued that one cannot simply extrapolate the  
604 effects of factors that influence the display of antisocial behavior to the non-display of  
605 prosocial behavior, and that one may need power to refrain from prosocial behavior. In line

606 with this, we showed that the moderating role of moral identity on the effects of depletion is  
607 present among people high in power, and not among people low in power.

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## Footnotes

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810 <sup>1</sup> Three respondents were not included in the analyses because they did not follow the  
811 instructions of the power manipulation. Inclusion of these three respondents in our analyses  
812 did not change any of the results. Most importantly, the predicted three-way interaction  
813 remained significant,  $\beta = .29, p = .01$ .

814 <sup>2</sup> We also conducted regression analyses in which the manipulation checks were predicted  
815 by the depletion manipulation, power manipulation, participants' moral identity, and the  
816 corresponding interaction terms. These analyses produced similar results to those presented in  
817 the main text. Specifically, power increased how powerful participants felt,  $\beta = .75, p < .001$ ,  
818 and decreased reported feelings of powerlessness,  $\beta = -.30, p = .01$ . Furthermore, participants  
819 in the high power condition were rated significantly more powerful than participants in the  
820 low power condition,  $\beta = .83, p < .001$ . Finally, depletion increased ratings of how hard,  $\beta =$   
821  $.43, p < .001$ , and habit-breaking the task was,  $\beta = .35, p = .001$ . In none of the analyses, other  
822 main or interaction effects were significant.

823 <sup>3</sup> We also conducted OLS regression analyses. These analyses produced similar results as  
824 the Tobit regression analyses. Most importantly, the predicted three-way interaction was  
825 significant,  $\beta = .28, p = .02$ .

826 <sup>4</sup> Focal employees who could be included in the analyses (i.e., because they had a  
827 coworker who was also willing to participate) did not differ from focal employees who could  
828 not be included in the analyses with regard to their mean level on the demographic variables  
829 and focal predictors. There was one exception: focal employees who could be included  
830 worked longer in their current organization than focal employees who were not included. This  
831 is most likely because longer tenure increases the likelihood of developing social connections  
832 with colleagues. This should make it easier to find a coworker willing to participate.

833 In addition, we also tested whether the correlations between the study variables were  
834 significantly different between included and not included employees. The correlations  
835 between the study's variables (Bonferroni corrected) did not differ between the two groups of  
836 focal employees. These analyses give us little reason to think that selection biases impacted  
837 our results and conclusions.

838 *Figure 1a.* Helping as a function of depletion and moral identity for participants high in  
839 power.

840

841 *Figure 1b.* Helping as a function of depletion and moral identity for participants low in power.

842

843 *Figure 2a.* OCB (coworker rating) as a function of depletion and moral identity for high  
844 power employees.

845

846 *Figure 2b.* OCB (coworker rating) as a function of depletion and moral identity for low power  
847 employees.

848 Table 1

849 *Results of Hierarchical Regression Analysis for Helping in Study 1*

Variables	<i>B</i>	<i>SE B</i>	$\beta$
Self-control depletion (SD)	-1.26	2.11	-.06
Moral identity (MI)	5.24	3.90	.15
Power (P)	-0.34	2.11	-.02
SD x MI	1.24	3.90	.04
SD x P	-2.14	2.11	-.11
MI x P	3.66	3.90	.11
SD x MI x P	11.55	3.92	.34**

850 *Note.* Final model:  $-2 \log \text{likelihood} = -311.39$ ,  $\chi^2(7) = 11.29$ ,  $p = .13$ . *B* = unstandardized  
851 regression coefficient;  $\beta$  = standardized regression coefficient. For the self-control depletion  
852 manipulation, -1 denotes no self-control depletion; 1 denotes self-control depletion. For the  
853 power manipulation, -1 denotes low power; 1 denotes high power.

854 \*  $p < .05$ . \*\*  $p < .01$ .

855 Table 2

856 *Descriptive Statistics and Intercorrelations of Study 2 Measures*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10
1. Self-control depletion	2.29	0.93	(.72)									
2. Moral identity	4.02	0.70	-.19	(.77)								
3. Power	3.51	0.77	-.23*	.30**	(.89)							
4. OCB (colleague rating)	3.87	0.52	-.19	.36**	.27**	(.91)						
5. Age (focal)	44.13	11.37	-.22*	-.15	-.03	-.04						
6. Gender (focal)	1.41	0.50	-.05	.13	.15	.20	.04					
7. Tenure (focal)	12.83	10.80	-.11	-.14	-.09	.01	.66**	-.03				
8. Education level (focal)	3.57	1.03	-.05	.25*	.18	.09	-.12	-.09	-.13			
9. Age (colleague)	42.96	10.98	-.12	-.17	.00	-.18	.32**	.06	.11	-.19		
10. Gender (colleague)	1.50	0.50	-.20	.29**	.14	.27**	-.12	.67**	-.13	.10	-.19	
11. Education level (colleague)	3.36	0.91	-.08	.27**	.31**	.07	-.04	-.15	.03	.64**	-.22*	.05

857 *Note.* N = 94. Internal reliabilities (coefficient alphas) are provided in parentheses on the diagonal. For gender, 1 denotes males, 2 denotes

858 females.

859 \*  $p \leq .05$ . \*\*  $p \leq .01$ .



Table 3

*Results of Hierarchical Regression Analysis for OCB in Study 2*

Variables	<i>Step 1</i>	<i>Step 2</i>	<i>Step 3</i>	<i>Step 4</i>
Age of focal employee	-.03	-.05	-.09	-.08
Gender of focal employee	.10	.09	.07	.07
Tenure of focal employee	.08	.12	.16	.15
Education level of focal employee	.06	.06	.07	.06
Age of colleague	-.14	-.16	-.12	-.10
Gender of colleague	.17	.07	.08	.11
Education level of colleague	.00	-.13	-.06	-.07
Self-control depletion (SD)		-.10	-.04	-.09
Moral identity (MI)		.26	.22*	.23*
Power		.19	.16	.15
SD x MI			.33**	.41***
SD x Power			-.29**	-.31**
MI x Power			-.03	.05
SD x MI x Power				.25*
$R^2$	.10	.23	.34	.38
$R^2_{adj}$	.03	.13	.23	.27
$R^2_{change}$	.10	.13**	.11**	.04*
$F$	1.35	2.42*	3.14**	3.45***

*Note.* Table presents Beta coefficients. For gender, -1 denotes males, 1 denotes females.

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .