Self-Regulating the Effortful "Social Dos"

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In the current research, we explored differences in the self-regulation of the *personal dos* (i.e., engaging in active and effortful behaviors that benefit the self) and in the self-regulation of the *social dos* (engaging in those same effortful behaviors to benefit someone else). In 6 studies, we examined whether the same trait self-control abilities that predict task persistence on personal dos would also predict task persistence on social dos. That is, would the same behavior, such as persisting through a tedious and attentionally demanding task, show different associations with trait self-control when it is framed as benefitting the self versus someone else? In Studies 1–3, we directly compared the personal and social dos and found that trait self-control predicted self-reported and behavioral personal dos but not social dos, even when the behaviors were identical and when the incentives were matched. Instead, *trait agreeableness*—a trait linked to successful self-regulation within the social domain—predicted the social dos. Trait self-control did not predict the social dos even when task difficulty increased (Study 4), but it did predict the social don'ts, consistent with past research (Studies 5–6). The current studies provide support for the importance of distinguishing different domains of self-regulated behaviors and suggest that social dos can be successfully performed through routes other than traditional self-control abilities.

Keywords: social self-regulation, self-regulation, relationships, trait self-control, trait agreeableness

Exercising, finishing a work project, and painting a house all have something in common—they are effortful, they require perseverance in order to finish, and they entail battling the urge to quit or engage in other more appealing activities. In other words, these behaviors are self-regulated. Self-regulation, broadly, is defined by setting a standard to achieve a goal, investing the necessary effort to move toward reaching this goal, and monitoring one's progress in order to shield the goal against temptations or obstacles (Carver & Scheier, 1981, 1999; Godfrey & Shum, 2000; Mischel, Cantor, & Feldman, 1996; Muraven & Baumeister, 2000; Vohs & Baumeister, 2004). When the behavior being performed requires high amounts of attention, perseverance through feelings of aversion or frustration, and inhibition of competing impulses (such as temptations to quit), the behavior may be especially difficult to perform. Therefore, persevering through tasks that are effortful and tedious—whether it be initiating action (e.g., eating more vegetables) or practicing restraint (e.g., eating fewer cookies)—requires active self-regulation to summon the necessary commitment and mental resources to perform tasks that may not have been performed otherwise (Forgas, Baumeister, & Tice, 2009; Norman & Shallice, 1986).

In past research, it has been most common to focus on the self as the beneficiary of self-regulated behavior. However, there are situations in which these exact same behaviors are being performed for someone else. That is, you are exercising for your sister (so that she does not have to be alone), you are assisting a partner with a work project, or you are helping paint your best friend's house. The recipient of the hard work changes, but the self-regulatory nature of the tasks does not. These behaviors still require monitoring in order to meet a goal or standard and require persistence on the task despite aversion, difficulty, or fatigue. The behaviors still must be pursued in the face of temptations or distractions. These instances reflect social, rather than personal,

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self-regulation; the only change is in the beneficiary or recipient of the behavior. Interestingly, these types of social self-regulation behaviors have not frequently fallen within the scope of traditional self-regulation research.

The examples of social self-regulation discussed above can be described as *social dos*, effortful social actions that require initiating and persisting at behaviors that are not always inherently enjoyable or interesting, in order to benefit someone else. We propose that the social dos are a particular domain of self-regulated behavior that can be situated in a broader 2 × 2 self-regulation framework that incorporates both the recipient of the effortful behavior (self vs. other) and the type of effortful behavior (an action or a restraint). One can self-regulate to benefit oneself (personal self-regulation), but one can also self-regulate to benefit others (social self-regulation). Effortful behaviors can be either initiatory, requiring effortful action to promote a positive outcome (the *dos*), or they can be inhibitory, requiring effortful restraint to prevent a negative outcome (the *don'ts*). See Figure 1 for a depiction of the framework.

In the current research, we focus on two cells of this framework, specifically investigating factors that may distinguish the self-regulation of personal dos versus social dos. Is a personal doer the same type of person as a social doer? Would the same effortful behavior be performed more successfully by a given individual if it is framed as benefiting the self or someone else? Does the answer depend on the personality of the doer? We explore the possibility that even when the personal do behavior is identical to the social do behavior, they might not operate via the same self-regulatory routes and therefore might not share the same predictors.

Self-Regulating Personal Dos Versus Social Dos

In this article, we examine a basic and yet fundamental question—what qualities predict highly successful social doers, and are they the same qualities that predict highly successful personal doers? Is the type of person who is successful at going to the gym on a regular basis also the type of person who is successful at getting up early to shovel the driveway for a stressed partner? Although the social dos clearly fall into the domain of self-regulated behavior when considered in the 2 × 2 framework, they have been understudied by self-regulation researchers. This is especially striking because the other three cells (personal dos, personal don'ts, and social don'ts) in this framework *have* been systematically studied by self-regulation researchers (e.g., Crescioni et al., 2011; Duckworth & Seligman, 2005; Finkel & Campbell, 2001; Gailliot & Baumeister, 2007). Nevertheless, it remains unknown whether the social dos are predicted by the same traits and qualities as the personal dos. To the extent that the traits of successful social doers and personal doers overlap, it suggests similar underlying self-regulatory processes for the two domains. To the extent that the traits of successful social doers and personal doers are distinct, however, it suggests that there may be different routes by which doers successfully initiate and maintain effortful action in the two domains. We suspect that some people may be better at performing the social dos than others, apart from their self-regulation successes or failures in performing the personal dos.

Type of self-regulation [actions versus restraints]	**Recipient of self-regulation** [self versus other]	
	Personal dos *Do exercise *Do complete the project	**Social dos** *Do help others *Do support others
	Personal don'ts *Don't spend impulsively *Don't smoke	**Social don'ts** *Don't lie *Don't behave aggressively

Figure 1. A 2 × 2 self-regulation framework that incorporates both the recipient of the effortful behavior (self vs. other) and the type of effortful behavior (an action or a restraint).

In determining whether the social dos are predicted by the same qualities as the personal dos, we explore what is currently known about the traits of successful personal doers. A considerable amount of self-regulation research has demonstrated that one particular personality trait, *trait self-control*, serves as a powerful predictor of successfully engaging in the personal dos (Tangney, Baumeister, & Boone, 2004). People high in trait self-control eat healthier (Tangney et al., 2004), manage their finances more successfully (Romal & Kaplan, 1995), demonstrate higher academic achievement (Duckworth & Seligman, 2005), and exercise more frequently (Crescioni et al., 2011), for example. Trait self-control is generally seen as a set of correlated abilities related to successfully inhibiting impulses that are in conflict with goals, sustaining behavior in the face of delayed rewards, and focusing on goals when other opportunities compete for attention (de Ridder, Lensvelt-Mulders, Finkenauer, Stok, & Baumeister, 2012; Muraven & Baumeister, 2000; Schmeichel & Zell, 2007; Tangney et al., 2004). Trait self-control is also associated with high executive function and strong activation in the frontal regions of the brain (Casey et al., 2011). Thus, trait self-control is one route to successful self-regulation.[1]

[1] Although some researchers use the term self-regulation interchangeably with the term self-control (e.g., Baumeister & Bushman, 2008), we define self-regulation more broadly as do many researchers (e.g., Carver & Scheier, 1981, 1999; Godfrey & Shum, 2000; Hofmann, Schmeichel, & Baddeley, 2012). From this perspective, self-control is a route to achieving successful self-regulation, through the control of conflicts between central, long-term goals and peripheral, short-term goals. Self-control mechanisms include inhibiting predominant responding, controlling attention, and delaying gratification (e.g., Fujita, 2011). In our view, self-control represents but one of many routes to achieving successful self-regulation (the dependent measure of interest in the current studies). For example, in order to successfully complete a project, one might use self-control abilities to resist the impulse to watch television, but there are other ways to self-regulate toward achieving the goal (e.g., activating well-established work habits or drawing energy from the intrinsic rewards of the work).

One possibility is that the social dos draw on self-control abilities to the same extent that the personal dos draw on self-control abilities. This is a reasonable prediction in light of the plethora of research linking trait self-control to many self-regulated behaviors. Turning to the 2 × 2 self-regulation framework, past research has demonstrated that trait self-control predicts behavior not only in the personal dos cell, as reviewed above, but also in the personal don'ts cell (e.g., Audrain-McGovern, Rodriguez, Tercyak, Neuner, & Moss, 2006; Baumeister, 2002; Vohs & Faber, 2007) and even in the social don'ts cell. For example, people high in trait self-control demonstrate reduced aggression and lower sexual infidelity (DeWall, Baumeister, Stillman, & Gailliot, 2007; Gailliot & Baumeister, 2007). Since trait self-control has been a systematic predictor of self-regulated behaviors in three cells of the proposed 2 × 2 framework, there is every reason to believe that it might also predict the social dos cell. Indeed, it seems reasonable to postulate that the executive functions that go along with trait self-control are the basic building blocks of all self-regulated behavior.

On the other hand, it is also possible that the social dos do not draw on the same ability-related resources as the personal dos. Although trait self-control is one route to self-regulation success, there are a number of other important routes to successful self-regulation beyond self-control ability. Behaviors that are well-practiced, in line with implicit attitudes, and/or intrinsically rewarding, for example, can be performed without a high degree of self-control ability (e.g., de Ridder et al., 2012; Finkel et al., 2012; Muraven, Gagne, & Rosman, 2008; Webb & Sheeran, 2003). For instance, when people are highly motivated (e.g., when motivation is autonomous vs. controlled) or made to feel that doing a task is important, they are more successful at self-regulating at that task (Muraven & Slessareva, 2003; Nix, Ryan, Manly, & Deci, 1999; Robinson, Schmeichel, & Inzlicht, 2010). Thus, high motivation (especially if it is intrinsic) facilitates self-regulation success because there is less internal conflict about goal pursuit and people feel more energized while completing the task. This suggests that valuing the standard that is being pursued will lead to more successful self-regulation than if the standard is not highly valued. In addition, research also indicates that even effortful self-regulated behaviors can become habitual if well-practiced (Bargh, 1997; Gollwitzer, 1999; Ouellette & Wood, 1998; Posner & Snyder, 1975); the processes that activate behavior become automatic, unfolding even in the absence of strong self-control abilities.

It is possible that the social dos are a domain in which people are frequently able to attain high behavioral outcomes via routes that do not require high self-control abilities. For one thing, the rewards of social dos are not necessarily highly delayed—social doing can create immediate high positive affect and feelings of well-being (Dunn, Aknin, & Norton, 2008). Therefore, delay of gratification abilities (linked to trait self-control) may not be necessary for successful social doing. Instead, other constructs related to successful self-regulation, such as intrinsic motivation, values, and well-practiced behaviors, may be the predictive routes to engaging in the social dos.

Some researchers have hypothesized that motivation, ability, and practice may combine to create a specialization in this type of self-regulation; that is, some people may become "specialized" in performing the social dos (Rothbart & Ahadi, 1994; Rothbart & Bates, 1998). What trait might capture this self-regulatory specialization? Trait agreeableness is a clear candidate (Graziano & Habashi, 2010; Graziano, Habashi, Sheese, & Tobin, 2007). Trait agreeableness is related to several social domain specialized constructs, including intrinsic social motivation (Roccas, Sagiv, Schwartz, & Knafo, 2002; Tobin, Graziano, Vanman, & Tassinary, 2000), well-practiced social behaviors (Digman & Takemoto-Chock, 1981; Jensen-Campbell & Graziano, 2001), and automatic prosocial responding (Meier, Robinson, & Wilkowski, 2006; Perunovic & Holmes, 2008; Wilkowski, Robinson, & Meier, 2006), for example. Because of these deeply internalized social values and automatic tendencies toward prosocial responding, highly agreeable people likely have a lifetime of practice succeeding at exactly the kinds of active social effortful behaviors that comprise the social dos.

Returning to the question of interest, if it is true that success in performing the social dos is driven by the same self-control abilities as performing the personal dos, then trait self-control ought to be the best predictor of the social dos. Alternatively, if performing the social dos is driven by a set of specific self-regulatory constructs such as motivation and practice, this suggests that social doers are likely to be agreeable people, not necessarily people with high trait self-control. If the latter is true, there are several interesting implications; for example, a poor personal doer may be able to achieve the same behavior if the behavior was framed as benefitting someone else.

Research Question and Hypotheses

Our primary research question is whether social doing is predicted by the same trait as personal doing. We explore the possibility that even when the personal do behavior is identical to the social do behavior, they might not operate via the same self-regulatory routes. This would suggest that a personal doer, the type of person who goes to the gym and consistently meets deadlines, may not be the same person as a social doer, the type of person who helps their parents move heavy furniture and provides support to a complaining partner. We are faced with two competing hypotheses: On one hand, we might expect that the social dos are predicted by the same ability related trait that predicts the personal dos (trait self-control). On the other hand, it is possible that the social dos will be predicted by agreeableness, a trait that captures many self-regulation constructs that are relevant to the social sphere. In other words, the social dos may work via different mechanisms than the personal dos, and therefore the same traits may not predict both types of behavior.

The Present Research

In six studies, we examined whether the social dos were predicted by the same trait as the personal dos. In Studies 1–3, we directly compared the personal and social dos by equating the behavior but manipulating the framing, and examining whether or not the behaviors were predicted by the same trait, using both self-report and behavioral measures of self-regulated effort. In Studies 4–5, we examined alternative explanations for the results of Studies 1–3, and in Study 6, we examined the full 2 × 2 self-regulation framework. Taken together, the studies aim to investigate whether social doers are the same as personal doers, or

whether the social dos are better predicted by a specialized trait for social self-regulation.

Study 1

The purpose of Study 1 was to explore the traits that predict the personal dos versus the social dos. If the same effortful action is framed as either benefiting the self or as benefiting someone else, will it be predicted by the same trait? In Study 1, we investigated this question by having participants rate the exact same effortful behaviors framed as either benefitting the self (personal dos) or a close other (social dos). In line with previous research, we hypothesized that the personal dos would be best predicted by trait self-control. The key question in this study concerned the social dos: Would they also be predicted by trait self-control? Or would they be best predicted by trait agreeableness, a socially specialized trait?

Method

Participants. A total of 265 (193 females, 72 males) undergraduate students participated in exchange for course credit. Participants were between 17 and 36 years of age ($M = 19.14$, $SD = 1.88$).

Procedure and measures. Participants completed the study online and were asked to fill out surveys measuring their levels of trait agreeableness and trait self-control. To assess trait self-control, participants completed Tangney et al.'s (2004) dispositional self-control scale. Participants responded to the 36 items on a 1 (*not at all like me*) to 5 (*very much like me*) scale. Sample items include the following: "I am good a resisting temptation," "I engage in healthy practices," and "I wish I had more self-discipline." The scale had good reliability in this sample ($\alpha = .89$). Trait agreeableness was assessed using the Big Five Aspects Scale (DeYoung, Quilty, & Peterson, 2007) with 20 trait agreeableness items, such as "I feel others' emotions," "I inquire about others' well-being," and "I rarely put people under pressure," rated on a 5-point scale from 1 (*strongly disagree*) to 5 (*strongly agree*). This scale also had good reliability ($\alpha = .89$).

Participants then completed two versions of an effortful behavior scale. Both versions listed the same 17 effortful, tedious behaviors, and instructed participants to rate how willing they would be to perform each behavior on a scale from −3 (*not at all*) to 3 (*very much*). Sample behavior items included the following: "I would read a book cover to cover, even if I felt it was boring," "I would walk 30 minutes in the rain to a library to get a book," and "I would spend 2 hours copying numbers on a computer." In the social framing version of the survey ($\alpha = .93$), participants were asked to identify a person in their life who they felt very close to and cared very much about. Each effortful behavior item then ended with the phrase "if it would make this person very happy." In the personal framing version of the survey ($\alpha = .93$), each item ended with the phrase "if it meant that it would make me very successful." Scores for the social dos and the personal dos were modestly correlated with each other ($r = .24$, $p < .001$). The order of the social and personal scales was counterbalanced across participants. No order effects were found.

Table 1
Predictors of Reported (Study 1) and Behavioral (Studies 2–3) Social and Personal Dos

	Study 1		Study 2		Study 3	
Predictor	Personal dos	Social dos	Personal dos	Social dos	Personal dos	Social dos
Trait self-control	.18*	−.06	.42*	−.05	.26*	.04
Trait agreeableness	−.03	.29*	−.03	.31†	.05	.29*

Note. Column values are standardized parameter estimates within each condition.
† $p < .06$. * $p < .05$.

Results

We conducted a repeated measures analysis of effort scores with personal/social framing as a within-subjects factor, and trait self-control and trait agreeableness as between-subjects covariates.[2] There was no significant main effect of framing; participants had similar willingness scores when effort was framed as personal ($M = 1.27$, $SD = 1.19$) or framed as social ($M = 1.48$ $SD = 1.06$), $F(1, 237) = 0.22$, $p = .637$. The interaction between scale framing and trait self-control, $F(1, 237) = 15.41$, $p < .001$, and the interaction between scale framing and trait agreeableness, $F(1, 237) = 10.89$, $p = .001$, were both statistically significant in the predicted directions.[3]

We conducted follow-up analyses to more closely examine how trait self-control and trait agreeableness predicted effort in the social versus personal condition (see Table 1). We first examined the predictors of the personal dos. We regressed scores for the personal dos on trait self-control and trait agreeableness. As shown in Table 1, when effort was framed as actions for personal benefit, trait self-control, $b^* = .18$, $t(248) = 2.80$, $p = .006$, but not trait agreeableness, $b^* = –.03$, $t(248) = −0.46$, $p = .647$, was a significant predictor. We next examined the predictors of the social dos. When effort was framed as actions for social benefit, trait self-control did not predict reported behavior, $b^* = −.06$, $t(248) = −1.03$, $p = .304$, but trait agreeableness did, $b^* = .29$, $t(248) = 4.62$, $p < .001$ (see Figure 2).

Finally, we examined the three-way interaction between trait self-control, trait agreeableness, and framing condition. Consistent with a "different self-regulation systems" theory, the three-way interaction was nonsignificant, $F(1, 236) = 0.07$, $p = .791$, indi-

[2] Trait agreeableness and trait self-control were frequently correlated in all studies (mean $r = .19$, standard deviation $r = .19$). Thus, readers may wonder whether trait self-control was positively correlated with social effort when trait agreeableness was not simultaneously in the model. The correlation between trait self-control and social effort was negligible in this and all studies (mean $r = .04$, standard deviation $r = .09$) and was nonsignificant in all studies ($rs < .16$, $ps < .172$), except for Study 6, $r(398) = .12$, $p = .021$. The association between trait self-control and social effort was never significant in any study when trait agreeableness was simultaneously included in the model.

[3] In this and all studies, the Trait × Framing Condition interactions remained statistically the same when omitting the other predictor (e.g., the Trait Agreeableness × Framing interaction without trait self-control in the model), except for in Study 2. In that study, the Trait Self-Control × Framing interaction's p-value dropped to .181 without trait agreeableness in the model, and the Trait Agreeableness × Framing interaction's p-value dropped to .342 without trait self-control in the model.

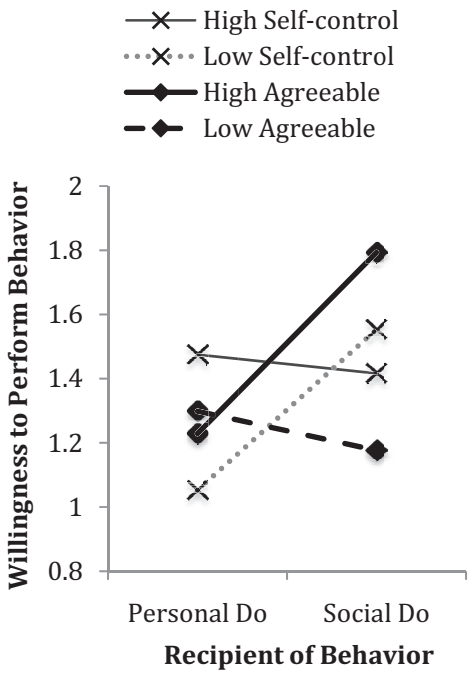

Figure 2. Figure represents predicted values calculated for individuals high and low (±1 *SD*) in trait self-control or agreeableness (Study 1). When the effortful behavior was framed as making oneself successful, high trait self-control showed the highest willingness, whereas low trait self-control showed the lowest willingness. When the effort was framed as making a close other happy, high trait agreeableness showed the highest willingness, and low agreeableness showed the lowest willingness.

cating that trait agreeableness and trait self-control did not interact with one another in either condition.[4]

Discussion

The results of Study 1 showed that participants' willingness to engage in effortful personal dos was not predicted by the same trait as was their willingness to engage in effortful social dos, even when the behaviors in both cases were identical. Consistent with past research (e.g., Tangney et al., 2004), trait self-control positively predicted personal self-regulated behavioral intentions. Trait self-control failed, however, to predict social self-regulated behavioral intentions, and instead trait agreeableness was the stronger predictor.

The three-way interaction between trait self-control, trait agreeableness, and framing condition was also nonsignificant, lending support to our contention that the social dos may be operating via different self-regulatory routes than the personal dos. One might imagine that trait self-control would still play a role in the self-regulation of social dos, but only when trait agreeableness is high (vs. low). This would suggest that for the social dos, trait agreeableness provides the motivation and trait self-control provides the ability. However, the data did not support this prediction, indicating instead that trait self-control was simply not a predictor of intentions to perform effortful social dos. Together, the two-way interactions and the lack of a three-way interaction offer preliminary support for the notion that the mechanisms that drive the social dos may be quite separate from the mechanisms that drive the personal dos.

Study 1 provided initial evidence that effortful social dos may be operating via different self-regulatory routes than effortful personal dos, and may draw on different traits.[5] However, this was a self-report study using hypothetical scenarios, which may or may not translate into actual effortful behavior. It might be the case, for example, that trait self-control does not correlate with people's *willingness* to engage in effortful social dos, but that it does correlate with people's actual *enactment* of those behaviors. Furthermore, the benefits in the social versus personal conditions were operationalized differently; in the social condition, the benefit to others was framed as "making others happy," whereas in the personal condition, the benefit to self was framed as "making oneself successful." This operationalization of self/other benefit may align naturally with typically desired outcomes in the self–other domains, but we recognize that it is not fully parallel, leaving open the possibility that differences between conditions were due not only to the personal/social difference, but also to the way in which the benefits were explicitly framed. Thus, in order to more confidently assert that effortful personal dos are indeed predicted by a different trait than effortful social dos, Study 2 implemented behavioral measures of personally and socially framed effort for an identical behavior in which we did not specify differential benefits (i.e., happiness vs. success).

Study 2

In Study 2, we sought to determine whether the results from Study 1 would replicate using quantifiable and observable behavioral effort as the dependent variable. We also extended the results of Study 1 by changing the recipient of the effortful behavior from a close other to a stranger. Participants were either given the opportunity to help a confederate on a difficult counting task (socially framed effort) or were asked to work on their own difficult counting task (personally framed effort). Based on the findings of Study 1, we expected that the personal dos would be predicted by trait self-control, but that the social dos would be predicted by trait agreeableness (and not trait self-control). That is, we predicted that even when observing the same self-regulated behavior in the lab, effortful social versus personal action would be predicted by different traits.

Method

Participants. A total of 79 (65 females, 14 males) undergraduate students participated in exchange for course credit. Partici-

[4] We conducted three-way interactions between trait self-control, trait agreeableness, and framing condition in all six studies. All three-way interactions, Fs < 0.51, ps $> .476$, were nonsignificant.

[5] We conducted an additional study ($N = 216$ undergraduate students) to rule out the possibility that social desirability and/or relationship variables, such as relationship satisfaction, might account for the association between trait agreeableness and willingness to perform effortful social dos. We found that trait agreeableness still significantly predicted willingness to perform effortful social dos even when controlling for self-monitoring (Lennox & Wolfe, 1984) and positive relationship feelings (Fletcher et al., 2000).

pants were between 18 and 40 years of age ($M = 19.32$, $SD = 3.02$).

Procedure. Participants completed background personality measures online before attending the lab session. In these background measures, they filled out the same trait self-control ($\alpha = .85$) and trait agreeableness ($\alpha = .87$) measures that were used in Study 1. When participants arrived at the lab session, they met another person, Katie, who they believed would also be participating in the study, but who was actually a trained confederate.[6] At the start of the lab session, the experimenter explained that one person would be randomly assigned to a counting task. The actual task assignment was rigged so that the confederate was always assigned to the counting task. Within earshot of the participant, the confederate was handed a stack of papers, each of which contained four grids. Each grid was 3 × 3.5 in. (7.62 × 8.89 cm) and was criss-crossed by lines 1/16 of an inch apart, creating 1,600 tiny squares within the grid. Approximately 10% (±3%) of these squares were shaded gray. The quadrants of each grid were outlined in bold. The confederate was instructed to count every shaded square in each quadrant of each grid. The experimenter explained that if any quadrant was counted incorrectly, the confederate would have to re-count that grid.

We pilot tested the counting task in order to ensure that the task was indeed experienced as requiring effortful self-regulation. Forty-three (25 males, 18 females) participants (paid $1.00) recruited from Amazon's Mechanical Turk (https://requester.mturk.com/) were instructed to count the shaded squares in five large grids. Participants then completed three scales. They were asked how effortful (e.g., difficult, challenging, demanding) the task was on a five-item scale ranging from 1 (*not at all*) to 7 (*extremely*) ($\alpha = .86$), how fatiguing the task was (e.g., taxing, mentally exhausting, draining) on a five-item scale ranging from 1 (*not at all*) to 7 (*extremely*) ($\alpha = .93$), and finally, the extent to which they had to overcome obstacles or distractions to complete this task, using the items "During the counting task, I was tempted to quit" and "I had to force myself to keep working on the counting task" rated on a 1 (*strongly disagree*) to 7 (*strongly agree*) scale ($\alpha = .81$). Consistent with our predictions, one-sample *t*-tests against the mid-point of the scale indicated that participants rated the task as effortful ($M = 4.91$, $SD = 1.47$), $t(42) = 4.07$, $p < .001$; fatiguing ($M = 4.97$, $SD = 1.55$), $t(42) = 4.09$, $p < .001$; and that it required overcoming the desire to quit ($M = 4.77$, $SD = 1.99$), $t(42) = 2.53$, $p = .015$, thus lending support to our contention that this was a task that required effortful self-regulation.

Once the confederate had begun the counting task, the experimenter explained that the participant would be doing a 5-min lexical decision task on the computer. When the lexical decision task (which was unrelated to the current study) was finished, the experimenter explained that the participant's next task would take 5 min to set up. Participants were given different instructions for how to spend these 5 min, depending on condition. In the socially framed effort condition, the experimenter took one of the confederate's grid sheets and handed it to the participant, saying, "This is part of Katie's task. In the next five minutes, you can *help Katie with her task*." In the personally framed condition, the experimenter handed the participant a new grid sheet, saying the following: "This is your task. In the next five minutes, you can *work on your task*." Everyone received identical square-counting tasks. If the participant completed more than one sheet, s/he was handed another sheet. Since there were both same-sex and opposite-sex pairs in this study, we tested for gender effects. There were no gender effects on effortful behavior.

Our measure of effortful behavior was the number of grid quadrants counted during the 5 min. After 5 min, participants were told that the study was over and were debriefed for suspicion.

Results

We conducted a regression analysis on task effort scores with framing condition, trait agreeableness, trait self-control, and the two Trait × Condition interaction terms included in the model. There was a main effect of task framing on performance, such that individuals in the personally framed effort condition exerted more task effort ($M = 6.47$, $SD = 2.16$) than individuals in the socially framed effort condition ($M = 4.13$, $SD = 6.46$), $b^* = .42$, $t(73) = 2.21$, $p < .001$. The Task Framing × Trait Self-Control interaction, $b^* = .19$, $t(73) = 1.71$, $p = .090$, and the Task Framing × Trait Agreeableness interaction, $b^* = -.18$, $t(73) = -1.63$, $p = .106$, were both in the predicted directions, although they did not reach the .05 level of significance.

Follow-up analyses examining the strength of traits predicting effort in the social versus personal condition revealed a full replication of the follow-up analyses of Study 1 (see Table 1). In the personally framed effort condition, trait self-control, $b^* = .42$, $t(33) = 2.34$, $p = .026$, but not trait agreeableness, $b^* = –.03$, $t(33) = -0.28$, $p = .748$, significantly predicted behavior. In the socially framed effort condition, however, trait agreeableness significantly predicted reported behavior, $b^* = .31$, $t(40) = 2.02$, $p = .051$, but trait self-control did not, $b^* = -.05$, $t(40) = -0.34$, $p = .738$ (see Figure 3). Thus, trait self-control once again failed to predict the social dos, even when the task was identical in the social and personal conditions, and even when the behavior was observable. Consistent with Study 1, trait agreeableness was the strongest predictor of the social dos.

Turning to Table 1, it is clear that the results of Study 2 were highly parallel to the results of Study 1, with the change in self-regulation framing causing one trait to diminish in importance and the other trait to grow in importance. The critical slopes were significant and consistent with our predictions; however, the two-way interactions were not significant at the $p < .05$ level. To test whether the full pattern of results in this study replicated the full pattern observed in the previous study, we conducted a single test of whether the framing manipulation affected the predictive power of the two traits differently. Specifically, we directly tested whether the Trait Self-Control × Framing Condition interaction was significantly different from the Trait Agreeableness × Framing Condition interaction using structural equation modeling. We first ran a model predicting task performance with framing condition, traits, and the two Trait × Condition interactions, constraining the betas for the two interaction terms to be equal to one another. Next, we ran a model in which the two interaction betas were unconstrained. This latter model provided a significantly better fit to the data, $\chi^2(1, N = 79) = 4.22$, $p = .040$. These results indicate that the framing manipulation indeed affected the predictive power of the two traits differently.

[6] No participants were suspicious that the confederate was an accomplice of the experimenter.

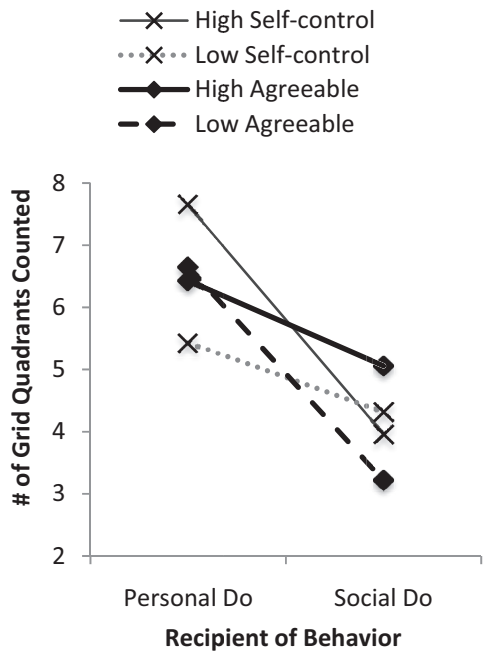

Figure 3. Figure represents predicted values calculated for individuals high and low (±1 *SD*) in trait self-control or agreeableness (Study 2). When the effortful behavior was framed as personal, high trait self-control showed the highest performance, whereas low trait self-control showed the lowest performance. When the effort was framed as helping another student, high trait agreeableness showed the highest performance, and low agreeableness showed the lowest performance.

Discussion

By examining observed effortful behavior rather than self-report, we replicated the results from Study 1, demonstrating that effortful personal doing was predicted by trait self-control and not by trait agreeableness, whereas effortful social doing was predicted by trait agreeableness and not by trait self-control. These results suggest that the double dissociation between socially and personally framed effort is not a reflection of bias in self-reported behavioral tendencies, but is an observable phenomenon.

Study 3

In Studies 1 and 2, the effortful behavior was equated across the social and personal framing conditions. Study 3 was designed to equate the benefit in the socially and personally framed effort conditions by offering a tangible, quantifiable, and identical incentive. In this study, participants were given the opportunity to earn a bonus course credit for either a friend (socially framed condition) or for themselves (personally framed condition) by answering difficult questions about a 10-paragraph reading passage. Based on the results of Studies 1 and 2, we hypothesized that the personal dos would be predicted by trait self-control, but that the social dos would be predicted by trait agreeableness (and not trait self-control). These results would suggest that effortful social versus personal action are predicted by different traits, even when benefits are controlled and equated across conditions.

Method

Participants. This study consisted of 226 (49 males and 177 females) undergraduate students who volunteered to take part in the study in exchange for course credit. Participants were between 17 and 52 years of age ($M = 19.54$, $SD = 3.99$).

Procedure. Participants signed up to complete a 1-hr online study. During the study, participants were asked to nominate a close friend who was enrolled in a psychology course that required research participation for course credit. Participants completed measures of trait self-control ($\alpha = .90$) and trait agreeableness ($\alpha = .87$), which were the same measures used in Studies 1–2. Participants also completed a battery of other unrelated questionnaires that required 40 min to complete. At the end of these questionnaires, participants were told that they had completed the study.

On the study completion web page, participants were informed that they had the opportunity to continue working on a new task to earn additional credit. In the socially framed condition, participants were told they could work to earn a bonus credit for their close friend (who they nominated at the beginning of the study). In the personally framed condition, participants were told they could work to earn themselves a bonus credit.

The bonus task required participants to read a long 10-paragraph passage, and to answer seven multiple-choice questions about the passage. In a separate pilot study, we gave participants the same reading passage task, once again in order to ensure that this particular task required effortful self-regulation. Forty-one (22 males, 19 females) participants recruited from Amazon's Mechanical Turk (paid $1.50) were instructed to read and answer questions about the 10-paragraph reading passage and were given the same three scales (effort, fatigue, and overcoming the desire to quit) as used in the pilot study of Study 2 (αs = .84, .96, and .82, respectively). Consistent with our predictions, one-sample *t*-tests against the mid-point of the scale indicated that participants rated the task as effortful ($M = 5.22$, $SD = 1.06$), $t(40) = 7.35$, $p < .001$; fatiguing ($M = 5.11$, $SD = 1.64$), $t(40) = 4.32$, $p < .001$; and that it required overcoming the desire to quit ($M = 4.96$, $SD = 1.78$), $t(40) = 3.47$, $p = .001$, thus lending support to our contention that this was a task that required self-regulation.

Participants were told that randomly hidden among the seven questions was a "prize winning question," and that the bonus credit would only be awarded if the prize winning question was answered correctly. The instructions informed participants that they could maximize the chance of earning the bonus by working very hard on all seven questions, but that they still might win the prize if they only worked hard on some of the questions or if they guessed. We coded the number of correct answers ($M = 3.62$, $SD = 2.60$) as an indication of task effort. All participants earned a bonus credit (for either themselves or for the friend, depending on condition) as long as they attempted at least one question.

Results

We conducted a regression analysis on task effort scores with framing condition, trait agreeableness, trait self-control, and both Trait × Condition interactions included in the model. There was no main effect of task framing on performance. Participants answered a similar number of questions correctly in the socially framed condition ($M = 3.46$, $SD = 2.59$) as they did in the

personally framed condition (M = 3.77, SD = 2.60), b^* = –.05, $t(209) = -0.70$, p = .484. The interaction between task framing and trait self-control, b^* = –.11, $t(209)$ = –1.62, p = .107, and the interaction between task framing and trait agreeableness, b^* = .13, $t(209)$ = 1.90, p = .059, were both in the predicted directions although they did not reach the .05 level of significance.

Follow-up analyses again fully replicated both Studies 1 and 2 (see Table 1). When the effortful task was being pursued to earn oneself a bonus credit, trait self-control, b^* = .26, $t(89)$ = 2.51, p = .014, but not trait agreeableness, b^* = .05, $t(89)$ = 0.45, p = .651, was a significant predictor of task performance. However, when it came to earning a bonus credit for a close friend, trait agreeableness, b^* = .29, $t(120)$ = 3.23, p = .002, and not trait self-control, b^* = .04, $t(120)$ = 0.48, p = .633, significantly predicted task performance (see Figure 4). Once again, trait self-control was not a significant predictor of the social dos, even though it predicted behavior on an identical task framed as benefitting the self.

Table 1 shows that the results of Study 3 were again highly parallel to the results of Studies 1 and 2. To test whether the full pattern of results in this study replicated the full pattern observed in the previous studies, we conducted a single test of whether the framing manipulation affected the predictive power of the traits differently. Thus, we tested whether the Trait Self-Control × Framing Condition interaction was significantly different from the Trait Agreeableness × Framing Condition interaction, using the structural equation modeling method described in Study 2. The results indicated that the two interaction betas were significantly different, $\chi^2(1, N = 79) = 6.81$, p = .009.

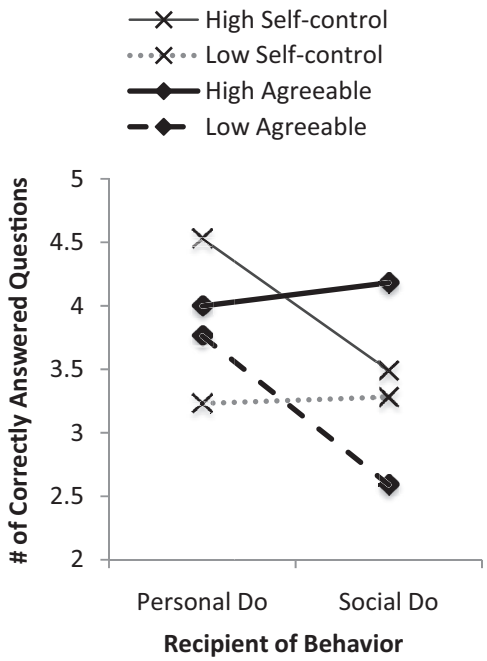

Figure 4. Figure represents predicted values calculated for individuals high and low (±1 *SD*) in trait self-control or agreeableness (Study 3). When the effortful behavior was framed as earning a bonus credit for oneself, high trait self-control showed the highest performance, whereas low trait self-control showed the lowest performance. When the effort was framed as earning bonus credit for a friend, high trait agreeableness showed the highest performance, and low agreeableness showed the lowest performance.

Discussion

This study replicated the findings from the previous studies, demonstrating that effortful personal dos were uniquely predicted by trait self-control, but that effortful social dos were not predicted by trait-self-control but instead by trait agreeableness. We obtained these effects in a paradigm that equated the social and personal conditions on (1) the effortful behavior to be performed and (2) the tangible benefit to be awarded.

It could be argued that our dependent measure in this study, performance on the reading passage questions, reflected not only differences in effort, but also differences in ability. To do well on this task, it is clear that participants had to exert effort; however, to the extent that participants exerted effort, differences in reading comprehension ability could also have affected performance. Although we recognize this as a limitation of this measure, we believe that this should not have biased our detection of differences in effort. It seems unlikely, for instance, that trait self-control would predict ability at answering reading comprehension questions in the personal condition, but that trait agreeableness would predict ability in the social condition. Thus, while ability may have played a role in our performance measure, it likely introduced noise, not bias, in our capacity to capture differences in effort. This interpretation also seems likely given that the results of this study parallel the results of Study 2 that employed an arguably more pure measure of effort. In subsequent studies, also, we ensure that our dependent measures are clear reflections of effort, not ability.

In sum, Studies 1–3 suggest that trait self-control plays little role in performing the social dos, even though it is a key predictor of the personal dos. Studies 4–5 were designed to explore this null association more deeply, to rule out potential confounds and alternative explanations. Study 4 was designed to investigate the possibility that trait self-control would become a significant predictor of effort if the social dos were more difficult. That is, we considered the possibility that our failure to detect a link between trait self-control and the social dos might have been an artifact of insufficient difficulty of the effortful social do tasks. In Study 4, we systematically varied the effort requirements of social dos to gain a better understanding of the relation between trait self-control and effortful social action. We also included a new relationship type, romantic relationships, to test the generalizability of our effect.

Study 4

Study 4 was designed to maximize the possibility of obtaining a relationship between trait self-control and the effortful social dos by manipulating the difficulty of the effortful social task. In this study, participants copied definitions onto flashcards in order to earn money on a gift card for their romantic partner. There were three task difficulty levels: In the easiest condition, participants copied definitions written in English using their dominant hand. In the moderate difficulty condition, participants copied definitions written in Greek using their dominant hand. In the most difficult condition, participants copied definitions written in Greek using

their nondominant hand. Writing with one's non-dominant hand is a paradigm that has been used in past research as a highly challenging self-regulation task (Finkel, DeWall, Slotter, Oaten, & Foshee, 2009; Gailliot, Plant, Butz, & Baumeister, 2007).

Regarding trait self-control, we hypothesized that for easy to moderately difficult social tasks, trait self-control would not predict social effort, as it did not in Studies 1–3. The purpose of the study was to investigate whether trait self-control would begin to predict social effort at the highest level of task difficulty. Regarding trait agreeableness, we hypothesized a main effect of trait agreeableness, such that trait agreeableness would predict social self-regulatory effort despite the difficulty level of the task (as the task still requires self-regulation in each condition, with more effort required as task difficulty increases). We were additionally curious whether the predictive power of trait agreeableness would increase as the social task became more difficult.

Method

Participants. The study consisted of 156 (121 females and 35 males) undergraduate students who volunteered to take part in the study in exchange for course credit. Participants were between 17 and 50 years of age (M = 19.90, SD = 3.56). In order to participate in the study, participants had to be in a romantic relationship (M length = 20.06 months, SD = 28.19). They were told the study concerned hand strength and dexterity, and that they would have the opportunity to earn up to $15 in gift cards for their romantic partners, in addition to the fixed amount of credit they earned for their participation in the study.

Procedure. Participants completed the same trait agreeableness (α = .88) and trait self-control (α = .86) measures as in Studies 1–3 online, prior to the lab session. Because past research has shown that positive relationship feelings predict social do behaviors (e.g., Collins & Feeney, 2000; Simpson, Rholes, & Nelligan, 1992; Van Lange et al., 1997), we also had participants complete a perceived relationship quality measure, which captured satisfaction, commitment, intimacy, trust, passion, and love, all of which are subsections of the Perceived Relationship Quality Scale (Fletcher, Simpson, & Thomas, 2000). Participants answered questions such as "How satisfied are you with your relationship?" (satisfaction subscale), "How much do you trust your partner?" (trust subscale), and "How passionate is your relationship?" (passion subscale), indicating their agreement on a 1 (*not at all*) to 7 (*extremely*) scale (α = .95). We controlled for perceived relationship quality in all of the analyses below.

Once in the lab, participants were given a questionnaire packet to complete. This packet included questions about dexterity, including handedness. Participants indicated the extent to which they agreed with the following question: "I am highly ambidextrous" on a 1 (*strongly disagree*) to 5 (*strongly agree*) scale. We controlled for this variable in all of the analyses below.

Once participants had finished their questionnaire packet, they were told they had the opportunity to earn a gift card to a coffee shop for their romantic partner, and that the amount they would earn on the gift card was entirely dependent on how hard they worked on the next task. Participants wrote down their romantic partner's first name on the envelope for the coffee shop gift card, and the gift card was placed in front of participants while they worked on the task. The task involved copying definitions onto flashcards. Participants were told that for each definition that they copied they would earn an additional $0.25 toward their partner's gift card and that they could copy as many definitions as they would like (they were stopped after 75 min).

The difficulty of the task was manipulated by instructing participants to either (a) use their dominant hand while copying English definitions onto flashcards (low difficulty condition), (b) use their dominant hand to copy Greek definitions onto flashcards (moderate difficulty condition), or (c) use their nondominant hand to copy Greek definitions onto flashcards (high difficulty condition). We used the number of flashcards completed as our dependent variable of effortful social action. We also timed how long participants spent on the task in order to examine how quickly participants quit, if they did not go the full 75 min. This variable allowed us to ensure that a low number of flashcards completed indicated quitting rather than working slowly and carefully. All participants received at least $5 in gift cards as long as they copied one definition.

Results

Number of flashcards completed. We conducted a generalized linear model (GLM) analysis of variance (ANOVA) on number of flashcards completed with task difficulty condition as a between-subjects variable and trait agreeableness and trait self-control as between-subjects covariates. We also controlled for relationship quality and ambidexterity by including these variables as covariates in the model.[7] There was a significant main effect of task difficulty on performance, $F(2, 144) = 4.70$, $p = .011$, which validated our manipulation. Participants completed the most flashcards in the low difficulty condition (M = 54.90, SD = 10.18), fewer flashcards in the moderate difficulty condition (M = 14.39, SD = 6.39), and even fewer in the high difficulty condition (M = 5.87, SD = 3.70).

There was no significant main effect of trait self-control on number of flashcards completed, $F(1, 144) = 0.35$, $p = .558$, and the effect of trait self-control on performance was not moderated by condition, $F(2, 144) = 0.02$, $p = .976$. Trait self-control did not predict number of flashcards in the low difficulty condition, $b^* = .04$, $t(43) = 0.29$, $p = .774$, or in the medium difficulty condition, $b^* = .02$, $t(48) = 0.15$, $p = .881$. Trait self-control also did not predict the number of flashcards in the high difficulty condition, $b^* = .11$, $t(49) = 0.76$, $p = .454$.

There was a significant main effect of trait agreeableness on number of flashcards completed, $F(1, 144) = 8.16$, $p = .005$, which was not significantly moderated by difficulty condition, $F(2, 144) = 0.24$, $p = .785$. Trait agreeableness positively predicted number of flashcards in the low difficulty condition, $b^* = .22$, $t(43) = 1.49$, $p = .145$; moderate difficulty condition, $b^* = .22$, $t(48) = -1.48$, $p = .146$; and high difficulty condition, $b^* = .38$, $t(49) = 2.38$, $p = .021$.

Time spent on the task. We conducted a GLM ANOVA on the time spent on the flashcard task with difficulty condition as a between-subjects variable and trait agreeableness and trait self-control as between-subjects covariates. We also controlled for relationship quality and ambidexterity by including these variables

[7] The analyses (p-values) remained statistically the same when these covariates were not included in the model.

as covariates in the model. There was a significant main effect of task difficulty on time spent working on the task, $F(2, 141) = 20.92$, $p < .001$. Participants persisted the longest in the low difficulty condition ($M = 61.47$ min, $SD = 13.18$), less long in the moderate difficulty condition ($M = 48.04$, $SD = 18.61$), and even less long in the high difficulty condition ($M = 34.69$, $SD = 19.71$), suggesting that as the task got harder, participants were more likely to quit before they had reached the maximum allotted time.

There was no significant main effect of trait self-control on task persistence, $F(1, 141) = 0.11$, $p = .744$, and the effect of trait self-control on task persistence was not moderated by condition, $F(2, 141) = 0.19$, $p = .831$. Trait self-control did not predict time spent on the task in the low difficulty condition, $b^* = .05$, $t(40) = 0.32$, $p = .754$; the medium difficulty condition, $b^* = –.13$, $t(48) = -0.79$, $p = .431$; or the high difficulty condition, $b^* = –.02$, $t(49) = -0.12$, $p = .903$.

There was a significant main effect of trait agreeableness on task persistence, $F(1, 141) = 5.86$, $p = .017$. The Trait Agreeableness × Condition interaction term was not significant, $F(2, 141) = 1.85$, $p = .161$, yet an interesting trend emerged. Trait agreeableness did not predict persistence in the low difficulty condition, $b^* = –.00$, $t(40) = -1.49$, $p = .987$; it began to predict persistence in the moderate difficulty condition, $b^* = .21$, $t(48) = 1.42$, $p = .162$; and it was mostly strongly predictive of persistence in the high difficulty condition, $b^* = .40$, $t(49) = 2.48$, $p = .016$. A subsequent linear trend analysis revealed that agreeableness more strongly predicted time spent on the task as the difficulty of the task increased sequentially, $F(1, 147) = 4.04$, $p = .046$.

Discussion

This study replicated the findings from Studies 1–3, demonstrating that the social dos were not predicted by trait self-control but rather by trait agreeableness. In this study, we manipulated the difficulty of the task in order to test the possibility that trait self-control might emerge as a significant predictor of social dos if the behavior was hard enough—this did not appear to be the case. Trait agreeableness, on the other hand, predicted both task performance and task persistence. This agreeableness effect emerged even when relationship quality variables such as trust and commitment were controlled. Interestingly, trait agreeableness most strongly predicted persistence in the hardest condition. It appears then, that our difficulty manipulation made the agreeableness effect stronger, rather than the trait self-control effect stronger. Despite all of our attempts (examining observable behavior, equating the incentive, and manipulating task difficulty), we have not observed a social do to be predicted by trait self-control.

Taken together, four studies have failed to find trait self-control as a significant predictor of effortful social do behaviors. One concern about this null effect is its contrast with the many findings in past research showing that trait self-control can predict social self-regulation (e.g., DeWall et al., 2007; Finkel & Campbell, 2001; Finkel et al., 2009; Gailliot & Baumeister, 2007). One possibility is that our data may simply represent a failure to replicate past research on social self-regulation. Another, and we believed more likely, possibility is that trait self-control may simply not predict the specific *type* of social self-regulation that we examine in this article: social dos rather than social don'ts.

Most past research on trait self-control and social self-regulation has focused on social don'ts rather than social dos: for example, holding back a negative impulse (not yelling at a romantic partner when in a fight; Finkel & Campbell, 2001) or refraining from falling into temptation (avoiding attractive opposite sex members when in a committed relationship; Pronk, Karremans, & Wigboldus, 2011). Accordingly, if we take a social do behavior and frame it as a social don't, trait self-control ought to re-emerge as a significant predictor. Thus, we hypothesized that consistent with past research, trait self-control would predict behavior that centers around the social don'ts, but that it would not predict the behavior if it is framed as a social do. In contrast, we predicted that trait agreeableness would predict behaviors framed as a social do, consistent with our past studies, and also that it will likely also predict the social don'ts (Meier et al., 2006; Wilkowski et al., 2006).

Study 5

In Study 5, we tested whether the same behavior would have different predictors depending on whether that behavior was framed as a social do or as a social don't. We expected to replicate the results of Studies 1–4 for the social do condition. We expected the social don't condition to differ in a key way—that trait self-control would emerge as an important predictor.

Using a behavioral lab task that kept the task itself constant, we adapted a paradigm from the regulatory focus theory framework (Higgins, 1997), and we framed the same behavior as either about promoting a positive social gain (a social do) or preventing a negative social loss (a social don't). In this study, participants were given the opportunity to earn money on a gift card for their romantic partner by completing up to 20 sheets of a difficult editing task. This editing task was the high-depleting version of the e-crossing task, in which participants are instructed to cross out *e*s but only under certain circumstances (Tice, Baumeister, Shmueli, & Muraven, 2007). Participants were either told that for each page that they edited, they would receive additional money for their partner's gift card (social dos framing condition), or for each page they failed to edit, they would have money taken away from their partner's gift card (social don'ts framing condition; cf. Shah, Higgins, & Friedman, 1998).

We purposefully chose a behavioral task that had both do and don't components: Crossing out some *e*s is an initiatory behavior, whereas inhibiting the urge to cross out *all e*s is an inhibitory behavior. By selecting a task that had both of these elements, we were able to frame the exact same behavioral task at a higher strategic level as either prevention (don't) or promotion (do). Based on regulatory focus theory, we hypothesized that whether an action "behaves" like a do or a don't depends on how the actor construes the behavior at the strategic level rather than on the lower-level properties of the action itself (Scholer & Higgins, 2008). Framing a behavior with loss framing should induce strategic avoidance, making it a "don't" behavior, whereas framing the same behavior in gain terms should induce strategic approach, making it a "do" behavior (Crowe & Higgins, 1997; Freitas & Higgins, 2002; Shah et al., 1998).

We expected that trait self-control would significantly predict social behavior when it was framed as a don't, but not when it was framed as a do. We also hypothesized that trait agreeableness

would significantly predict both social do and social don't framed behavior.

Method

Participants. A total of 70 (57 females, 13 males) undergraduate students participated in exchange for course credit. Participants were between 17 and 32 years of age (M = 19.79, SD = 2.47). In order to participate in the study, participants had to be in a romantic relationship (M length = 23.69 months, SD = 23.08).

Procedure. Participants came into the lab and were told that the study was about how personality influenced social behaviors. First they completed the same trait self-control (α = .85) and trait agreeableness (α = .84) measures that were used in Studies 1–4. Participants were then told that they had the opportunity to earn a $5 gift card for their romantic partner by completing an editing task. They were presented with 20 paragraphs of text about mathematical statistics and were told that they had to edit the paragraphs by crossing out every *e* located in the text, except for those that were followed by another vowel (e.g., read) or when a vowel was one letter removed from the *e* in the same word (e.g., vowel). Participants were told that if they missed an *e*, the text would not count as completed. This is a commonly used self-regulatory task that is considered highly depleting (Tice et al., 2007).

Participants were given one of two sets of instructions. In the social do framing condition, they were told that for each paragraph that they completed, they would earn an *additional* $0.25 toward their partner's gift card. In the social don't framing condition, participants were told that for each text that they failed to complete, they would have $0.25 *removed* from their partner's gift card. Participants were told that they had 30 min to complete the task and that they could complete as many of the 20 paragraphs as they wanted. Once participants had finished the task, they were told that the study was over and received the gift card for their partner. All participants were given a $5 gift card as long as they attempted one paragraph. The number of paragraphs completed served as our dependent variable.[8]

Results

We conducted a regression analysis on number of paragraphs completed with framing condition, trait agreeableness, trait self-control, and the two Trait × Condition interaction terms included in the model. There was no main effect of task framing, b^* = .17, $t(64) = -1.49$, p = .140. Participants completed a similar number of paragraphs in the social dos framing condition (M = 9.80, SD = 5.33) as the social don'ts framing condition (M = 11.82, SD = 5.55).

There was no main effect of trait self-control, b^* = –.13, $t(64)$ = 0.86, p = .413; however, the effect of trait self-control was moderated by task framing, b^* = .31, $t(64) = -1.96$, p = .054. Although trait self-control did not predict behavior framed as a social do, b^* = –.15, $t(30) = -0.80$, p = .433, it did predict behavior framed as a social don't, b^* = .32, $t(34)$ = 1.96, p = .058.

There was a significant main effect of trait agreeableness, b^* = .37, $t(64) = -2.16$, p = .035, which was not significantly moderated by condition, $b^* = -.16$, $t(64)$ = 0.87, p = .387. Trait agreeableness positively predicted behavior whether it was framed as a social do, b^* = .35, $t(30)$ = 1.88, p = .070, or as a social don't, b^* = .17, $t(34)$ = 1.06, p = .297 (see Figure 5).

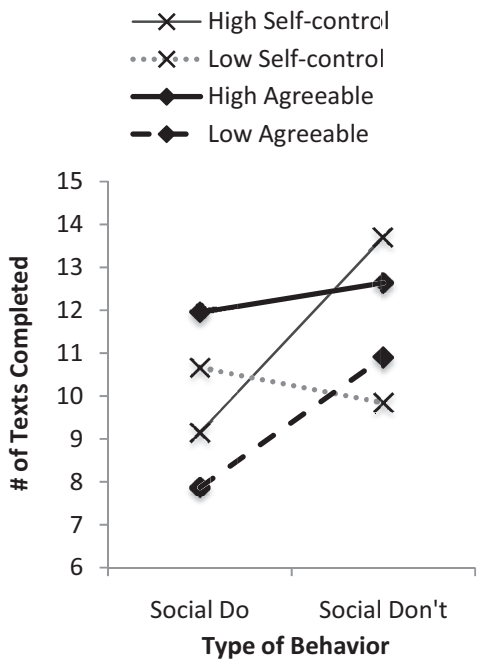

Figure 5. Figure represents predicted values calculated for individuals high and low (±1 *SD*) in trait self-control or agreeableness (Study 5). When the effortful behavior was framed as a social do, high trait agreeableness showed the highest performance, whereas low trait agreeableness showed the lowest performance. When the effort was framed as a social don't, high self-control showed the highest performance, and low trait self-control showed the lowest performance.

Discussion

The purpose of Study 5 was to demonstrate that we could elicit the effect of trait self-control in the social domain if the effortful social behavior was framed as a don't instead of as a do. As hypothesized, trait self-control predicted behavior when it was framed as a social don't, but not when it was framed as a social do. This was a particularly rigorous test of our hypothesis because the behaviors that participants were performing (and the recipients they were performing them for) were exactly the same across conditions. The only difference was whether the behavior was framed as a social do or social don't. Therefore, this study provides strong evidence that it is uniquely the social dos that trait self-control fails to predict. Moreover, consistent with Studies 1–4, it was instead trait agreeableness that predicted the social dos. In fact, although trait agreeable-

[8] To ensure that participants were putting in effort to do the task well, we also examined the percentage of correctly counted *e*s, quantified by adding the total number of *e*s that were correctly crossed and dividing that number by the total number of correctly crossed *e*s possible, as the dependent variable. The only difference in statistical significance across the two dependent variables was that the main effect of trait agreeableness became marginal at a p-value of .073.

ness was important for both the social dos and the social don'ts, it predicted the social dos most strongly.

Across five studies, the data suggest that initiating and persisting on effortful actions to benefit another person is a unique type of self-regulation that is predicted by a trait that captures specialized social self-regulation (trait agreeableness), rather than by trait self-control. The data from Study 5 also indicate that although trait self-control does not predict the kinds of social dos we have focused on in this article, it does indeed predict a different type of social self-regulation, that is, social don'ts.

Study 6

The purpose of Study 6 was to systematically examine our full proposed 2 (beneficiary: personal, social) × 2 (type of self-regulation: "dos," "don'ts") self-regulation framework using trait self-control and trait agreeableness as predictors. Although Studies 1–5 assessed behaviors that fell into each quadrant, no single study addressed all four types of behaviors. Thus, Study 6 aimed to replicate the findings of Studies 1–5 in a single within-subjects design. We hypothesized that trait self-control would not predict the social dos condition, but would predict all three other conditions. We hypothesized that trait agreeableness, on the other hand, would predict both types of social self-regulation, but neither type of personal self-regulation. These findings would provide further evidence that the social dos may be a particularly unique and interesting type of self-regulation not predicted by the same self-control ability trait that predicts success in the three other cells of this framework, but solely predicted by trait agreeableness.

Method

Participants. We recruited 400 (225 females, 172 males, 3 unspecified) American participants from Amazon's Mechanical Turk. Participants were between 18 and 66 years of age (M = 28.97, SD = 9.88) and were in romantic relationships (M length = 5.05 years, SD = 6.64).

Procedure. Participants completed the study online and completed measures of trait self-control (α = .90) and trait agreeableness (α = .89), which were the same measures used in Studies 1–5. Participants then completed a personal self-regulation scale and a social self-regulation scale, in a counterbalanced order. Each scale listed 30 effortful behaviors (15 dos and 15 don'ts) and instructed participants to indicate the extent to which they tended to perform each behavior. All 30 items were rated using a scale from 1 (*strongly disagree*) to 7 (*strongly agree*).

Measures.

Personal self-regulation scale. In the personal self-regulation scale, the 15 personal do items described positive personal behaviors that people may perform. Examples included the following: "I do a lot of strenuous exercise," "I always do all of my chores that need to get done," and "Whenever I need to attend an important function that will advance my goals in some way, I always attend, even when I don't feel like it." The 15 personal don't items described negative personal behaviors that are desirable to avoid. Examples included the following: "I never spend money impulsively on things I shouldn't," "I always quit bad habits or routines when I know quitting will advance my goals," and "I never eat fast food." The order of do and don't items within the scale was counterbalanced across participants. Both the Personal Do Self-Regulation Scale (α = .87) and the Personal Don't Self-Regulation Scale (α = .81) had good reliability.

Social self-regulation scale. In the social self-regulation scale, participants indicated the extent to which they tended to perform each behavior for their romantic partner. The 15 social do items described positive social behaviors that people may perform for others. Examples included the following: "I always do my partner time-consuming favors, even when there is something else I really want to do," "I always go out of my way to provide support and advice about a sensitive issue that my partner feels strongly about, even if I'm really not in the mood to talk about it," and "When my partner needs me to do an annoying favor, I always do the favor, even if it isn't fun." The 15 social don't items described negative personal behaviors that are desirable to avoid. Examples included the following: "I never tell my partner that he/she is overreacting, even when he/she definitely is," "In a time of extreme stress, I always calm down and hold back my stressed feelings if it's something my partner really needs," and "Whenever my partner does or says something that really makes me angry, I never act in an aggressive or hostile way to my partner (e.g., yelling/name calling), even though it's hard not to." The order of do and don't items within the scale was counterbalanced across participants, and no order effects were found. Both the Social Do Self-Regulation Scale (α = .94) and the Social Don't Self-Regulation Scale (α = .84) had good reliability. See Table 2 for correlations between the 4 self-regulation scales.

Results

We conducted a repeated measures ANOVA on behavior scores with the domain of regulation (social/personal) and the type of regulation (do/don't) as within-subjects variables and trait agreeableness and trait self-control as between-subjects covariates. There was a marginally significant main effect of domain, $F(1, 393) = 2.90$, $p = .090$. People reported engaging in social effort (M = 5.03, SD = 1.01) more than they did personal effort (M = 4.34, SD = 1.00). The main effect of regulation-type, $F(1, 393) = 2.46$, $p = .118$, and the Domain × Regulation Type interaction, $F(1, 393) = 2.52$, $p = .113$, were nonsignificant. See Table 3 for means and standard deviations.

All effects involving trait self-control (the main effect; the two-way interactions with domain and type of regulation; and the three-way interaction between domain, type, and trait self-control) were significant, Fs > 7.20, ps < .008. As can be seen in Table 4, trait self-control predicted self-regulation in the personal domain

Table 2
Correlations Between Social Dos, Social Don'ts, Personal Dos, and Personal Don'ts (Study 6)

Measure	1	2	3	4
1. Social dos	—			
2. Social don'ts	.63*	—		
3. Personal dos	.28*	.36*	—	
4. Personal don'ts	.16*	.27*	.61*	—

* $p < .05$.

more than in the social domain. In the social domain, trait self-control predicted the don'ts more than the dos, but it predicted the don'ts and the dos equally in the personal domain.

There was a main effect of trait agreeableness, which was qualified by significant two-way interactions for Domain × Trait Agreeableness and Regulation Type × Trait Agreeableness, Fs > 14.53, ps < .001. As can be seen in Table 4, the effect of trait agreeableness was more positive for the social domain than for the personal domain. This study also found that the effect of trait agreeableness was more positive for the dos than for the don'ts. There was not a significant three-way interaction between domain, regulation-type, and trait agreeableness, $F(1, 393) = 0.28$, $p = .597$ (see Figure 6).

In sum, Table 4 shows that trait self-control predicted every self-regulation cell in this framework except the social dos cell. Trait agreeableness, on the other hand, predicted both types of social self-regulation (the dos and don'ts). It did not predict the personal dos, and it predicted the personal don'ts in the negative direction.

Discussion

Study 6 confirmed that the social dos are unique among the four types of self-regulation in that they were not predicted by trait self-control. Reported engagement in the social dos was predicted by trait agreeableness alone. Although this study used self-report measures, these results replicated the findings of Studies 2–5 that employed measures of observed behavior. The findings suggest that people are able to achieve success at the social dos (unlike other domains of self-regulation) without drawing on trait self-control. Instead, factors associated with trait agreeableness are likely to play a more powerful role.

General Discussion

In six studies comparing the social dos to the personal dos, we found support for the hypothesis that each are predicted by different traits, suggesting that while the personal dos are attained primarily via self-control abilities, the social dos are attained via other specialized routes to successful self-regulation associated with trait agreeableness. We first demonstrated that while trait self-control predicted the personal dos (consistent with past research), it did not predict the same behavioral intentions/actions when they were framed to benefit others. Instead, trait agreeableness predicted the social dos. These effects were found using both self-report and behavioral measures, and were replicated even when the behaviors were identical (Studies 1–3), and even when the incentives were equated across conditions (Studies 2–3). Increasing the difficulty of the social do self-regulation task only enhanced the effect (Study 4), ruling out the possibility that trait self-control would emerge as a significant predictor only under extremely effortful conditions. Studies 5 and 6 provided further support for the distinctiveness of the social dos; while trait self-control predicted the social don'ts, consistent with past research, trait agreeableness remained the unique predictor of the social dos. Importantly, this was the case even when an identical behavior was framed as a social do versus don't (Study 5). Taken together, the results from six studies (two using self-report data, four using observed behavior data) suggest that social doers are not the same as personal doers. The findings suggest that individuals who are low in trait self-control and who perform poorly on personal doing may still achieve high levels of social doing—that a person who fails to do an effortful behavior when it is framed as self-benefitting may succeed at the same behavior when it is framed as other-benefitting.

Table 3
Means and Standard Deviations of Social Dos, Social Don'ts, Personal Dos, and Personal Don'ts (Study 6)

Personal		Social	
Dos	Don'ts	Dos	Don'ts
4.67 (1.01)	4.01 (1.00)	5.29 (1.02)	4.71 (0.92)

Note. Values in the table represent the means for each condition, with the standard deviations in parentheses.

Table 4
Predictors of Social Dos, Social Don'ts, Personal Dos, and Personal Don'ts (Study 6)

	Personal		Social	
Predictor	Dos	Don'ts	Dos	Don'ts
Trait self-control	.54*	.56*	−.02	.18*
Trait agreeableness	−.03	−.11*	.38*	.34*

Note. Column values are standardized parameter estimates within each condition.
* $p < .05$.

Although the pattern of results was consistent across studies, the overall Trait × Framing Condition interactions were not always statistically significant at $p < .05$. We therefore conducted a meta-analysis (Field & Gillette, 2010) of Studies 1, 2, 3, and 6 (the studies that manipulated personal vs. social doing) in order to determine whether the overall Trait Agreeableness × Framing and Trait Self-Control × Framing interactions were significant across studies. The meta-analysis supported the pattern of results observed across studies. Across studies, the estimate of the trait self-control effect on the personal dos was positive and significant ($d_+ = 0.38$, $p < .001$), 95% CI [.32, .43], whereas it was null for the social dos ($d_+ = -0.02$, $p = .731$), 95% CI [−.08, .04]. Across studies, the estimate of the trait agreeableness effect on the social dos was positive and significant ($d_+ = 0.33$, $p < .001$), 95% CI [.27, .39], whereas it was null for the personal dos ($d_+ = -0.01$, $p = .725$), 95% CI [−.08, .05]. Both the Trait Self-Control × Framing interaction ($d_+ = 0.29$, $p < .001$), 95% CI [.23, .35], and the Trait Agreeableness × Framing interaction ($d_+ = 0.29$, $p < .001$), 95% CI [.23, .34], were statistically significant.

Enacting Social Dos: Who Are the Social Doers?

Determining what predicts the social dos is valuable because engaging in the social dos is important for the well-being of relationships (Campbell, Simpson, Boldry, & Kashy, 2005; Overall, Fletcher, & Simpson, 2010; Van Lange et al., 1997) and for the culture of organizations (Davila & Finkelstein, 2013; Grant & Berg, 2011; Podsakoff, MacKenzie, Paine, & Bachrach, 2000). Beginning to unravel who enacts difficult

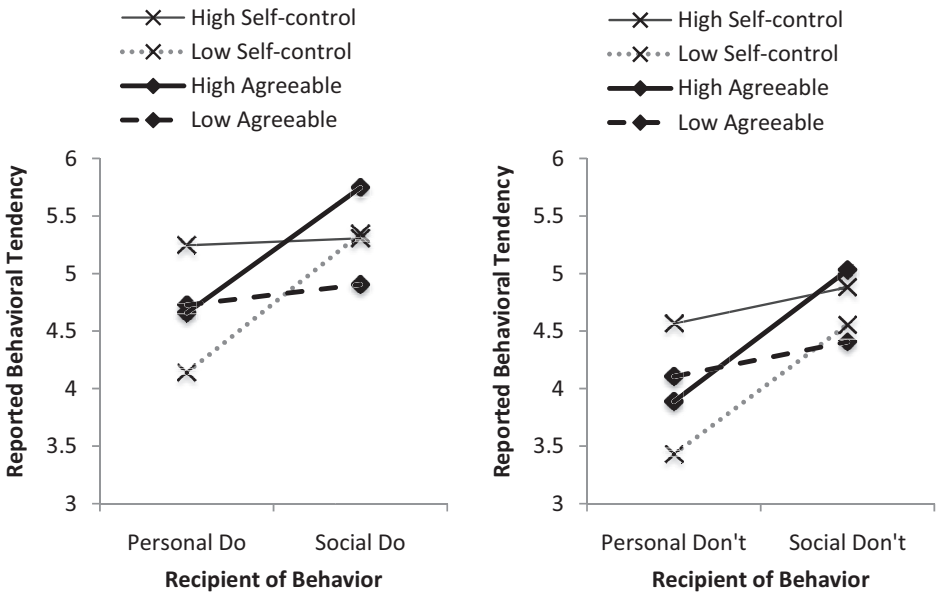

Figure 6. Figure represents predicted values calculated for individuals high and low (±1 *SD*) in trait self-control or agreeableness (Study 6). When the effortful behavior was framed as a personal do or a personal don't, people high in trait self-control reported being most willing to engage in effortful behaviors, and people low in trait self-control were the least willing. When the effort was framed as a social do or a social don't, people high in trait agreeableness reported being most willing to engage in effortful behaviors, and disagreeable people were the least willing.

behavior for others (as we have done here) has important implications. For instance, who should one ask for a ride to the airport at 6 a.m.—one's most self-disciplined friend or one's most agreeable friend? Our research suggests that the agreeable friend is the one to rely on when the behavior is difficult but helpful.

Our findings suggest that some people are specialized social self-regulators who excel at performing effortful behaviors that benefit others though they may not be adept at performing the same kinds of behaviors for themselves. When effortful dos are given a social framing, the highly agreeable social self-regulators outperform others. This has important implications for motivational interventions. Individuals who are highly agreeable but low in trait self-control, for instance, may not be particularly motivated to exercise regularly when they consider only the personal benefits. However, if these behaviors are framed in a manner consistent with the values and goals that agreeable individuals care about (e.g., helping others), this might motivate individuals to self-regulate successfully on exercise goals.

Trait Self-Control as a Predictor of Self-Regulated Behavior

An abundance of research has shown that trait self-control is a strong predictor of many self-regulated behaviors such as exercising, eating healthy, resisting impulsive spending, meeting important deadlines, and avoiding aggressive behaviors (Baumeister, 2002; DeWall et al., 2007; Tangney et al., 2004; Vohs & Faber, 2007). Consistent with this past research, we found that trait self-control predicted performance in three of the four cells in our 2 × 2 framework—personal dos, personal don'ts, and social don'ts. Our research provides evidence, however, that there is at least one area of self-regulated behavior (the social dos) in which trait self-control ability is not a primary driver of behavior. Across six studies, trait self-control did not predict behavior when it was framed as a social do, although trait self-control did predict the exact same behavior when it was framed as a personal do (Studies 1–3) or a social don't (Study 5). Our data suggest that nothing about the behaviors themselves need be different; across conditions, the behaviors were identical and difficult, requiring effort and perseverance. Indeed, increasing the difficulty of a social do behavior only strengthened the predictive power of agreeableness; trait self-control continued to not predict self-regulation of social dos (Study 4). It is clearly not the uncontextualized effortful behavior that determines whether it requires self-control ability to do it. Rather, our studies suggest that contextual factors related to the beneficiary of the self-regulated behavior (self or other) are an important influence on which routes emerge as the important paths to effective self-regulation. Indeed, we are not alone in suggesting that trait self-control is not the only way to achieve effective self-regulation (e.g., Fujita, 2011; Gollwitzer, 1999; Muraven & Slessareva, 2003; Sherman et al., 2008; Vallacher & Wegner, 2012).

How is it that a self-control ability trait predicts one self-regulated behavior (the personal dos) but not the exact same behavior when it is attached to a simple change in recipient framing (the social dos)? One possibility is that for different types of self-regulated behavior, the relative importance of motivation

versus ability may change. This could explain why the effects of trait self-control wax and wane from one type of self-regulation to another. The likelihood that motivation will translate into behavior is affected by self-regulation challenges that arise during the implementation phase of goal pursuit (Carver & Scheier, 1981, 1999; Godfrey & Shum, 2000; Gollwitzer, 1999; Mischel et al., 1996), such as delayed rewards, tempting distractions, conflicting impulses, and so forth. If there are fewer self-regulation challenges, motivational factors may become more important and ability factors may become less important. As noted earlier, among the four self-regulation cells in the framework, the social dos are unique in that at least some of the rewards for performing the behaviors are not delayed (Dunn et al., 2008; Kogan et al., 2010); people feel immediate gratification and positive affect after engaging in a prosocial action. Thus, the social dos may have fewer self-regulation challenges during the goal implementation phase, leading to a more direct translation of motivation into behavior.

It may also be the case that the self is implicated in different ways in the social dos relative to the other three cells. In order to achieve successful self-regulation in the other three cells, especially the personal cells, people may primarily strive to *control* the self. In order to successfully self-regulate the social dos, however, people may primarily strive to *transcend* the self (Crocker, Olivier, & Nuer, 2009; Leary, Adams, & Tate, 2006). Trait agreeableness is associated with values related to self-transcendence (Olver & Mooradian, 2003), therefore since trait agreeableness but not trait self-control predicts the social dos, this may suggest that self-transcendence rather than self-control is a primary route to self-regulation success in that domain.

It is worth considering whether the lack of a relationship between trait self-control and the social dos could be attributed to the trait self-control scale items themselves (i.e., a lack of "social do" items). From this perspective, one might argue that if the trait self-control scale were more comprehensive, trait self-control would predict behavior in all four cells of our 2 × 2 framework. If one is focused solely on increasing the predictive validity of the trait self-control scale, it is certainly true that the scale would predict the social dos more strongly if new social do items were added to the existing item set. However, from the perspective of construct validity, we believe this approach would dilute the construct the scale was intended to capture, and would undermine our understanding of what produces successful self-regulation in different domains. Researchers who study self-control argue that trait self-control is a unidimensional construct (Baumeister & Heatherton, 1996; Baumeister, Vohs, & Tice, 2007) that represents the strength of an individual's global pool of self-control resources. Our data strongly suggests that if social do items were added to the trait self-control scale, they would create a second factor in the scale, because social do items are *uncorrelated* with the existing trait self-control scale. Thus, adding social do items to the trait self-control scale would not change the conclusion that the social dos comprise a unique domain of self-regulated behavior that is predicted by different factors than the other three cells.

Emerging Research on the Self-Regulation of Social Dos

The present research adds to a small but growing interest in studying the social dos as a self-regulatory behavior (DeWall, Baumeister, Gailliot, & Maner, 2008; Kammrath & Peetz, 2011; Kammrath et al., 2013; Peetz & Kammrath, 2011; Righetti, Finkenauer, & Finkel, 2013). It is useful to examine the findings of this article in the context of this other work. The existing research can be divided into two groups of studies: those that examine effortful social doing and self-control depletion, and those that examine trait self-control (or the related construct, trait conscientiousness) as a predictor of effortful social doing.

Looking first at the depletion studies, researchers have found evidence that self-control depletion does not always negatively affect performance of effortful social dos. DeWall et al. (2008) demonstrated that self-regulatory depletion did not reduce helping behavior toward family members, although it reduced helping behavior toward strangers. Righetti et al. (2013) found that self-control depletion actually increased willingness to sacrifice for a romantic partner or best friend (sacrifice was measured as effortful social do items). Similar to the findings of Righetti et al., Kammrath et al. (2013) found that self-control depletion did not reduce effortful social doing for an established romantic partner but it did reduce effortful social doing for a new romantic partner. Taken together, these depletion studies suggest that self-regulatory depletion does not negatively impact performance of the social dos when the relationship context is highly interdependent (e.g., a family member or a long-time romantic partner).

Turning to the trait studies, a handful of studies support the findings of the current research showing that trait self-control, and the related trait conscientiousness, do not always positively predict the effortful social dos. Kammrath and Peetz found that trait conscientiousness did not predict effortful social dos for a romantic partner when the behaviors could be performed while the goal was highly accessible (Kammrath & Peetz, 2011) but did predict effortful social dos when the goal had to be held in mind and sustained over many days (Kammrath & Peetz, 2011; Peetz & Kammrath, 2011). Righetti et al. (2013) found that trait self-control was actually negatively correlated with participants' willingness to sacrifice (measured with effortful social do items) for a romantic partner or best friend. In this article, we have found that trait self-control showed a null association with effortful social dos. Taken together, the research suggests that trait self-control frequently has a null, or even negative, association with the performance of effortful social dos, as long as one is considering behaviors that are high in immediacy and do not need to be held in mind and remembered to be performed some time in the future.

Thus, the current studies fit with existing research in showing that the social dos are a unique self-regulation domain in which traditional self-control abilities are frequently not needed to achieve high levels of performance. There are, however, some inconsistencies in the findings across research programs, suggesting the presence of important moderators that need further study. For example, the immediacy of the behavior being performed likely matters—a behavior that requires prospective memory might be predicted by self-control abilities, whereas a behavior that is linked to a currently accessible goal might not (Kammrath & Peetz, 2011). The type and length of relationship may also play an important role in determining the predictors of the social dos (DeWall et al., 2008; Kammrath et al., 2013; Righetti et al., 2013). Although our studies found that the null trait self-control effect emerged irrespective of relationship type (the null effect was found in five studies using close others as the targets of behavior and in

one study using a stranger), future research should continue to explore relationship type and length as a moderator, as this variable has emerged as an important moderator in depletion studies.

Future Directions

Future research is needed to move from examining the trait level to the process level in understanding the predictors of each of the four self-regulation cells. Regarding trait self-control, this trait is associated with many executive function abilities. Currently, it is unknown how these specific abilities correlate with each of the self-regulated behaviors situated in the 2 × 2 framework. Examining such associations could prove fruitful for understanding how and why the domain of the social dos is unique from the other cells. For example, perhaps impulse inhibition is a key executive function ability associated with the don'ts (personal and social), and perhaps it is also implicated in the in the personal dos but not the social dos. This might suggest that goal-inconsistent impulses are more of a problem for dos framed as personal than for dos framed as social. Regarding trait agreeableness, we conceive that it is a specialized self-regulatory trait in the social domain; however, the specific mechanisms responsible (e.g., motivation, goals, or habits) are still unknown and merit future research. It could be, for example, that social doers (i.e., agreeable people) have an intrinsic (vs. extrinsic) motivation to pursue social doing, or that they perform social doing through an automated, non-deliberative response.

Conclusions

In conclusion, the findings of the present research provide insight on the social dos from a self-regulatory perspective. Our studies demonstrated that engaging in the social dos is not predicted by the same self-control ability trait that predicts engaging in the personal dos. Instead, the social dos operate via specialized routes captured best by trait agreeableness. The type of person to spend three painful hours helping a romantic partner work on a tedious project is not necessarily the same type of person to spend three painful hours working on *their own* tedious project. This research suggests that the social dos may be a specialized form of self-regulation that needs to be studied in its own right. This research also suggests that self-control abilities are not necessarily the basic building blocks for all forms of self-regulation, and therefore opens up new possibilities for future explorations into other processes that may prove highly important in self-regulatory success in specific domains.

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