

Going Beyond the “Self” in Self-Control: Interpersonal Consequences of Commitment Strategies

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Commitment strategies are effective mechanisms individuals can use to overcome self-control problems. Across seven studies (and two supplemental studies), we explore the negative interpersonal consequences of commitment strategy choice and use. In Study 1, using an incentivized trust game, we demonstrate that individuals trust people who choose to use a commitment strategy less than those who choose to use willpower to achieve their goals. Study 2 shows this relationship holds across four domains and for integrity-based trust in particular. Study 3 provides evidence that it is the choice to use the strategy rather than strategy use itself that incurs this integrity penalty. In Studies 4–5b, we demonstrate that this effect is driven, at least in part, by the fact that people infer past performance from strategy choice. Finally, Study 6 provides evidence that people select commitment strategies more in private than in public, which is consistent with the notion that people anticipate the negative consequences of commitment strategy choice. Thus, we establish the role of willpower as a positive signal in impression formation as well as the negative interpersonal consequences of choosing to rely on external aides when faced with temptation.

Keywords: willpower, commitment strategy, trust, integrity, signaling

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It isn't what you do, but how you do it.

—John Wooden

When working on this very project, one of the authors decided to use internal willpower to design studies, analyze data, and write up results without succumbing to the temptation of watching funny cat videos on the internet. The other author decided to use a combination of a web blocker to limit access to distracting websites, public commitments to accomplishing certain tasks by specified deadlines, and a timer set for 25-min intervals of intense focus. While both authors ended up completing their tasks, this article examines whether the decision of which of these methods to use affects the judgments of outside observers. In other words, consistent with revered college basketball coach John Wooden's saying quoted above, we explore whether people's goal achievement behavior is judged not just on what they achieve but how they choose to go about achieving it.

Self-control, the ability to prioritize beneficial long-term goals over immediate desires, is valued in a functioning society. Demon-

strating the capacity for self-control at a young age has been shown to predict future educational achievements (W. Mischel et al., 1988), employment outcomes (Daly et al., 2015), health outcomes (Moffitt et al., 2011), and even credit ratings (Moffitt et al., 2011). Among adults, better self-control is associated with individual benefits, such as lower rates of obesity (VanEpps et al., 2016) and lower levels of debt (Gathergood, 2012), as well as interpersonal benefits, such as stronger relationships (Finkel & Campbell, 2001; Tangney et al., 2004) and increased trustworthiness in the eyes of others (Righetti & Finkenauer, 2011).

While self-control as a whole can be beneficial, recent work has noted that there are actually multiple paths people can take to achieve the outcome of being self-controlled (Inzlicht et al., 2021). Of particular importance, some forms of self-control involve using internal resolve to resist temptation in the moment—often referred to as using *willpower* (Duckworth et al., 2019). Other forms of self-control involve using external aides to avoid temptation altogether. While it is possible to demonstrate self-control by using brute-force internal willpower, recent research has shown that this is less effective than taking steps to avoid being placed in a tempting situation to begin with (Adriaanse et al., 2014; de Ridder et al., 2012; Galla & Duckworth, 2015; Hofmann et al., 2012). Often referred to as *commitment strategies*, these external approaches are an arrangement one enters into to constrain future behaviors either by changing one's physical environment or the decision environment (and thus changing the payoffs associated with different behaviors). The use of commitment strategies has been shown to increase goal achievement across a number of domains, including smoking cessation, weight loss, academic achievement, and financial savings (for a review, see Bryan et al., 2010).

While previous work has identified the myriad individual-level benefits of using commitment strategies compared to internal

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willpower, little work has examined the potential interpersonal implications of choosing to use one of these forms of self-control over another. In particular, we examine how an individual's choice of self-control strategy influences the inferences people draw about that individual. We find that, despite the usefulness of commitment strategies, observers consistently form more negative impressions of targets who choose to use commitment strategies than targets who choose to use internal willpower. We propose that this is because the decision to use a commitment strategy signals a deficiency in one's character; that is, people believe that those who require an external aid (as opposed to completing the goal using internal willpower) are more likely to have failed at their goal achievement attempts in the past and are thus less capable of overcoming self-control problems themselves. Because self-control (and by extension, we assert, the signal one gives regarding one's ability to overcome self-control problems) is moralized, and morality is an important component of integrity-based trust in particular, this leads commitment strategy users to be seen as less trustworthy than willpower users.

Willpower and Commitment Strategies

Though research in the behavioral sciences sometimes treats willpower and self-control interchangeably, willpower is in fact only one of many self-control strategies one could use while trying to avoid temptation when pursuing long-term goals (Fujita, 2011; Gillebaart & de Ridder, 2015; Hofmann & Kotabe, 2012; A. S. Kristal & Zlatev, 2021). In particular, willpower is conceptualized as an internal "brute force" approach used in the moment to resist temptation directly (Duckworth et al., 2019; Katzir et al., 2021). A classic example of willpower in action is the "marshmallow test" designed by Mischel and colleagues (W. Mischel & Ebbesen, 1970; W. Mischel et al., 1972). In that work, children were seated in a room and asked to avoid eating a small number of marshmallows in order to receive a larger number later. The ability to sit in front of these marshmallows without eating them, knowing a larger reward was coming later, is what we and others refer to as willpower.

The "in-the-moment" nature of willpower can be contrasted with other self-control approaches that are instead planned in advance to avoid being placed into a tempting situation altogether (Duckworth et al., 2019).¹

One particularly effective and well-studied external alternative to "willpower" is the use of commitment strategies (Bryan et al., 2010; Rogers et al., 2014). Commitment strategies involve taking an action prior to exposure to a temptation in order to increase the cost of, or preclude the ability to act upon, the future temptation. This idea has been inherent in the psychological and economic literature for decades under various names such as "precommitment" (Strotz, 1955), "self-binding" (Elster, 1979), "anticipatory self-command," "strategic self-frustration" (Schelling, 1984), and "commitment devices" (Bryan et al., 2010).

Commitment strategies themselves can vary on several dimensions. They can be hard commitments, making it nearly impossible to engage in an activity (e.g., Homer's Odysseus, knowing he would be tempted to certain death by the song of the sirens, binding himself to the mast of his ship); alternatively, they can be a softer form of commitment, making it relatively less desirable to engage in an activity (e.g., publicly committing to a deadline). Commitment strategies can rely on enforcement from a wide variety of sources, including technology (e.g., using an app to block distracting websites while working) or close others (e.g., paying a friend \$5 if

you fail to show up to a gym session). A central component of a commitment strategy is that it is external to the self—something one can use as opposed to relying on an internal force of will (Duckworth et al., 2016; A. S. Kristal & Zlatev, 2021).

In addition to the domains discussed earlier, commitment strategies have proven effective at increasing savings rates (Thaler & Benartzi, 2004), facilitating smoking cessation (Giné et al., 2010), increasing gym attendance (Milkman et al., 2014), reducing alcohol consumption (Goldstein, 2001), and increasing productivity (Marotta & Acquisti, 2017). The fact that commitment strategies are an effective way to deal with self-control problems is well-established. However, most relevant to the present article, this prior work has looked only at the "first-order" effects of commitment strategies—that is, the immediate impact on the individual using them. We build on this work by focusing instead on the "second-order" effects or the ways in which beliefs about commitment strategies may affect how people judge those who decide to use them. We hypothesize that individuals will view targets who opt to use commitment strategies less favorably than targets who opt to use willpower to achieve the same goal. We outline our reasoning behind this hypothesis in the following sections.

The Value of Successfully Exerting Self-Control

As discussed above, the exertion of self-control involves the pursuit of what one should do over the temptation of what one wants to do. Successfully doing so requires that one resist desires to act in ways that are unhealthy, selfish, or immoral. Prior work has argued that people moralize self-control because failures violate group-based morals and norms (Mooijman et al., 2018). As such, failing to achieve these sorts of desirable goals reflects a character deficiency—that one is unable (or unwilling) to act in line with socially acceptable standards.

Additional evidence demonstrates that people value in others the ability to overcome temptation or delay gratification. For example, delay of gratification has been proposed as a central tenet of the Protestant work ethic (Miller et al., 2002), and the effective use of self-control more generally—both in close others and strangers—is associated with increased perceptions of trustworthiness (Righetti & Finkenauer, 2011). In addition, prior work has demonstrated that adults view overcoming inner conflict as more morally laudable than doing the right thing in the absence of this conflict (Berman & Small, 2018; Starmans & Bloom, 2016). Beyond the Western context, children in China also recognize that delaying gratification can have reputational benefits and are therefore more likely to do so when they know their behavior will be observed (particularly by an authority figure such as a teacher; Ma et al., 2020). In sum, people

¹ In order to clarify this distinction between "intrapsychic" approaches to self-control that require willpower and situational strategies that are external to the self, we draw on models of emotion regulation (Gross, 1998) and subsequent extensions into the domain of self-regulation (Duckworth et al., 2014, 2016). This work documents five points at which regulation can occur: (a) selection of the situation (e.g., choosing not to keep cookies in the house), (b) modification of the situation (putting the cookies out of reach), (c) deployment of attention (not looking at the cookies), (d) change of cognitions (focusing on how many calories are in the cookies), and (e) modulation of responses (resisting the cookies). The first two represent what we refer to as external situational strategies that occur in advance of the temptation, while the final three represent what we refer to as internal approaches meant to resist temptation in the moment.

place a high value on their own and others' ability to regulate their own behaviors and directly resist temptation in the face of conflicting desires or goals.

Self-Control Strategy Choice as a Signal of Character

Although the outcome of being self-controlled can be achieved in many ways, we argue that people may view the decision to use an external strategy as more indicative of prior failure than the decision to use an internal strategy such as willpower. Just as the use of bumpers in a bowling alley or training wheels on a bicycle can represent a lack of confidence in one's bowling or cycling ability, the choice to externalize the effort required to overcome a self-control problem might signal that one is unsure of one's ability to succeed without outside aid.² Moreover, as discussed above, willpower specifically is often erroneously viewed as synonymous with self-control more broadly. Emerging research backs up this claim, suggesting that people tend to hold the lay belief that the use of willpower is more indicative of self-control than the use of other strategies (Gennara et al., 2023). As such, this work suggests that people view willpower as the "default" strategy used by others to overcome self-control problems. Therefore, the decision to use a commitment strategy may suggest evidence of a prior self-control failure that necessitated this switch.

In the next section, we outline how the premises we have put forth so far relate to our outcome measure of interest: trustworthiness.

Self-Control and Trustworthiness

We focus our examination of how people react to others' choice of self-control techniques on evaluations of trustworthiness. Trust is a critical component of sustained social interactions. Relationships characterized by high levels of trust are more persistent, productive, and amicable, whereas distrust can erode or end once-fruitful collaborations (Cook et al., 2005; Schweitzer et al., 2006; Wieselquist et al., 1999; Zaheer et al., 1998). While past research has identified many facets of trust (Mayer et al., 1995; Rempel et al., 1985), we focus on two components that are particularly relevant to impression formation (Dorison et al., 2022; Levine & Schweitzer, 2015; Zlatev, 2019): integrity-based trust and benevolence-based trust.

Integrity is commonly defined as adherence to a consistent set of principles (Mayer et al., 1995). In particular, McFall (1987) proposed that one can arguably be said to have integrity if one's beliefs meet two criteria. First, one's beliefs must be internally coherent (both with respect to one's other beliefs as well as one's actions and motivations). Second, one's beliefs must relate to socially valued topics. In other words, they must involve values that people would generally agree are important. It is this second criteria that is particularly relevant to the present work. To the extent that the choice of using willpower is seen as more indicative of successful engagement in socially valued behaviors than the choice of using commitment strategies, it stands to reason that the decision to use willpower may be seen by others as higher in integrity than the decision to use a commitment strategy.

Benevolence—the other facet of trustworthiness we explore here—is typically defined as the degree to which a trustee has good intentions toward a trustor (Mayer et al., 1995). The proximal link between past performance and benevolence—and hence the more

distal link between self-control strategy choice and benevolence—is less clear. While people may have other reasons for believing a willpower user is benevolent, we do not have strong *ex ante* beliefs about what those reasons might be. Thus, we expect the impact on benevolence perceptions to be less pronounced than on integrity perceptions.

Connections to Prior Research

While prior work has proposed that self-control more broadly is moralized (Mooijman et al., 2018) and that those exhibiting self-control in general are seen as more trustworthy (Righetti & Finkenauer, 2011), this work has not distinguished between different self-control strategies available to an individual. This is important because recent work demonstrates that people do not view all self-control strategies equivalently, underscoring the importance of examining them separately (Gennara et al., 2023). Moreover, prior work has largely focused on the outcome of engaging in self-control (i.e., whether someone's attempt to behave in a self-controlled way succeeds or fails). In contrast, the present work focuses on the process by which self-control strategies are decided upon and used.

Our article also relates to the nascent literature on the importance of distinguishing between different self-control strategies (Duckworth et al., 2016; Fujita, 2011; Katzir et al., 2021) and highlights that not all strategies are perceived to be equally laudable. While the present work begins to explore the interpersonal consequences of using different types of self-control strategies, it also lays the groundwork for a new approach to exploring why people may fail to use effective strategies at their disposal. Despite the benefits of commitment strategies for achieving self-control, there is evidence that people often do not use them (Giné et al., 2010; Marotta & Acquisti, 2017; Moser et al., 2019; Royer et al., 2015). The interpersonal consequences may be one piece of this puzzle, a point we return to in Study 6 and the General Discussion.

Research Overview

Across seven studies (and two supplemental studies), we explore whether people who choose to use commitment strategies are judged more negatively than people who choose to use internal willpower to overcome self-control problems. Specifically, we hypothesize that people who opt for commitment strategies over willpower are trusted less and viewed as lower in integrity. In Study 1, we demonstrate this effect in an incentive-compatible trust game. In Study 2, we examine the generalizability of this phenomenon by demonstrating its persistence across a variety of self-control situations. In Study 3, we demonstrate that it is specifically the choice to use a commitment strategy, rather than its actual use, that incurs this reputational penalty. In Studies 4–5b, we explore the mechanism—inferences about past performance—we propose is driving this effect, using both correlational and causal designs. Finally, in Study 6, we examine a potential implication of this work by exploring whether people are less likely to choose commitment strategies in public than in private.

All studies received relevant institutional review board approval and were preregistered. All materials, data, and code are available at <https://researchbox.org/470>. We sought to maximize power by collecting at least 100 participants per condition (Nelson et al., 2018).

² We return to this point in the General Discussion section.

In each study, we report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures (Simmons et al., 2012).

Study 1

Study 1 tests the primary question of whether people are more likely to trust those who choose to use willpower as opposed to a commitment strategy to achieve their goal. The preregistration for Study 1 is available at https://aspredicted.org/VYY_Q3G.

Method

Participants

We recruited 400 participants and preregistered that we would exclude participants who failed both comprehension checks. Our final sample consists of 383 participants (48.8% female, 34.2% non-White; $M_{\text{age}} = 35.1$, $SD_{\text{age}} = 12.7$) recruited from Prolific Academic who took part in an online experiment in exchange for monetary payment.

Procedure

Participants first read instructions for a modified version of the trust game (Berg et al., 1995), which involves two players, referred to here as the blue player and red player. Participants took on the role of the blue player, who received a \$0.50 endowment they would pass to the red player.³ Once the participant passed the money to the red player, the value of that money tripled to \$1.50, and the red player would have the choice to keep the entire \$1.50 or split it with the participant (thereby each receiving a bonus of \$0.75). After answering two comprehension questions about the trust game, participants read about two other online workers who could serve as the red player in their game. Specifically, participants read:

We are recruiting other Mechanical Turk workers to serve as the RED player.

Some of those Mechanical Turk workers choose to use *willpower to resist* tempting websites (like Facebook or YouTube) when working online.

Some of those Mechanical Turk workers choose to *download an app that blocks* tempting websites (like Facebook or YouTube) when working online.

You have the option to pass the \$0.75 to a RED player who uses willpower or to pass the \$0.75 to a RED player who uses the app.

Remember—you want to send the money to the person who you trust is more likely to split it with you.

Which option do you choose?

After deciding who they wanted to pass the money to, participants provided their demographic information.

Results

Trust Behavior

Our primary dependent measure was which of the two red player options participants chose to play with (i.e., who participants

preferred to pass the money to): the person who chose to use the commitment strategy or the person who chose to use willpower.

Of the 383 participants in our final sample, 120 (31%) chose to pass the money to the red player who opted to use the commitment strategy, and 263 (69%) chose to pass the money to the red player who opted to use willpower. A chi-squared test indicated that participants preferred to pass the money to the player who chose willpower by a significant margin ($\chi^2 = 52.65$, $p < .001$). In other words, people were significantly less likely to trust those who opted to use an external commitment strategy compared with those who opted to use willpower.

Discussion

We demonstrated in an incentive-compatible study that people are less likely to trust those who decide to use commitment strategies as opposed to willpower to achieve their goals (see Study S1 in the online Supplemental Material for a replication). However, there are two key limitations of this study, which we address in Study 2. First, Study 1 only looked at one type of commitment strategy within a single context. Second, Study 1 examined trust more broadly but did not look at the two components of trust—integrity and benevolence—outlined above. We next seek to explore if our predictions hold across a wider range of scenarios and when looking specifically at integrity-based trust. Study 2 also explores whether people hold different beliefs about the efficacy of different goal achievement methods.

Study 2

Study 2 examines whether people ascribe less integrity-based trust to commitment strategy users than to willpower users across four different self-control scenarios. The preregistration for Study 2 is available at <https://aspredicted.org/blind.php?x=p5ej6f>.

Method

Participants

Six hundred two participants (49.5% female; 24.6% non-White; $M_{\text{age}} = 40.5$, $SD_{\text{age}} = 12.8$) from Amazon Mechanical Turk took part in an online experiment in exchange for monetary payment.

Procedure

Participants were randomly assigned to read one of four vignettes regarding two individuals facing self-control problems. In each vignette, one individual tried solving the problem by relying on willpower, while the other did so by using a commitment strategy (namely, paying a friend \$5 upon failing to exercise self-control). The four scenarios included avoiding drinking alcohol, avoiding junk food, increasing gym attendance, and obtaining a flu shot (see Table 1 for the full text of each scenario).

After reading the scenario, participants rated each individual in the vignette on a 7-point scale regarding that individual's integrity ("has a great deal of integrity," "can trust their word," and "cares

³ We recruited a separate group of participants to make decisions as the red player in order to avoid deception when matching participants for bonus payments.

Table 1
Scenarios Used in Study 2

Alcohol avoidance	Junk food avoidance	Flu shot	Gym attendance
Max and Tom both want to drink less alcohol. At a party on New Years Eve, they can each decide whether they want to use pure willpower to avoid drinking alcohol or to set up a system where they pay a friend \$5 if they drink alcohol.	Christine and Jane both want to stop eating as much unhealthy food. They can each decide whether they want to use pure willpower to avoid eating junk food in their house or to set up a system where they pay a friend \$5 if they eat junk food.	Angela and Katy both want to get a flu shot this year. They can each decide whether they want to use pure willpower to go to the clinic and get the shot or to set up a system where they pay a friend \$5 if they fail to get the shot.	Andrew and Brett both want to exercise more, specifically by going to the gym three times a week. They can each decide whether they want to use pure willpower to go to the gym or to set up a system where they pay a friend \$5 each time they plan to go to the gym but do not make it.
Max chooses to use pure willpower to avoid drinking alcohol at the party. Tom chooses to pay a friend \$5 if he drinks alcohol at the party.	Christine chooses to use pure willpower to avoid eating junk food at home. Jane chooses to pay a friend \$5 if she eats junk food at home.	Angela chooses to use pure willpower to get the flu shot. Katy chooses to pay a friend \$5 if she does not get the flu shot.	Andrew chooses to use pure willpower to go to the gym three times a week. Brett chooses to pay a friend \$5 each week if he does not make it to the gym three times.

about honesty and truth,” $\alpha = .93$), benevolence, (“is kind,” “is nice,” and “is selfish” [reverse-coded], $\alpha = .75$), and morality (“is moral” and “is ethical,” $\alpha = .97$; items are from Levine & Schweitzer, 2015). Participants then indicated on a bipolar 7-point scale who would be more likely to achieve their goal (1 = *definitely the person using willpower*, 4 = *both equally likely*, and 7 = *definitely the person using the commitment strategy*).

Results

To test our predictions, we employed a series of mixed-effects linear regressions with random intercepts for participants and scenario fixed effects.

Integrity-Based Trust

As predicted, participants rated targets who opted for a commitment strategy to achieve their goal as having significantly lower integrity-based trust than targets who opted for willpower, $\beta = 0.40$, $SE = 0.05$, $t(601) = 8.04$, $p < .001$; see Figure 1. This difference was significant within each individual scenario: flu shot, $\beta = 0.53$, $SE = 0.11$, $t(300) = 4.76$, $p < .001$; gym attendance, $\beta = 0.39$, $SE = 0.11$, $t(300) = 3.48$, $p < .001$; alcohol avoidance, $\beta = 0.39$, $SE = 0.11$, $t(304) = 3.51$, $p = .001$; and junk food avoidance, $\beta = 0.28$, $SE = 0.12$, $t(292) = 2.40$, $p = .017$.

Benevolence-Based Trust

We additionally found that targets who opted for a commitment strategy were rated significantly lower on benevolence-based trust than targets who opted for willpower, $\beta = 0.17$, $SE = 0.04$, $t(601) = 4.28$, $p < .001$. However, this difference was only significant in the flu shot scenario, $\beta = 0.29$, $SE = 0.11$, $t(300) = 2.58$, $p = .010$, and was marginally significant in the alcohol avoidance scenario, $\beta = 0.22$, $SE = 0.11$, $t(304) = 1.961$, $p = .051$. We failed to detect a significant difference in benevolence-based trust by condition in either the gym attendance scenario, $\beta = 0.08$, $SE = 0.12$, $t(300) = 0.76$, $p = .448$, or the junk food avoidance scenario, $\beta = 0.08$, $SE = 0.12$, $t(292) = 0.68$, $p = .498$.

Finally, we compared the relative strength of the effect of strategy choice on integrity-based trust compared with the effect of strategy choice on benevolence-based trust. We found a significant interaction, indicating that the effect was stronger for integrity-based trust than for benevolence-based trust, $\beta = 0.26$, $SE = 0.06$, $t(1803) = 4.212$, $p < .001$.

Discussion

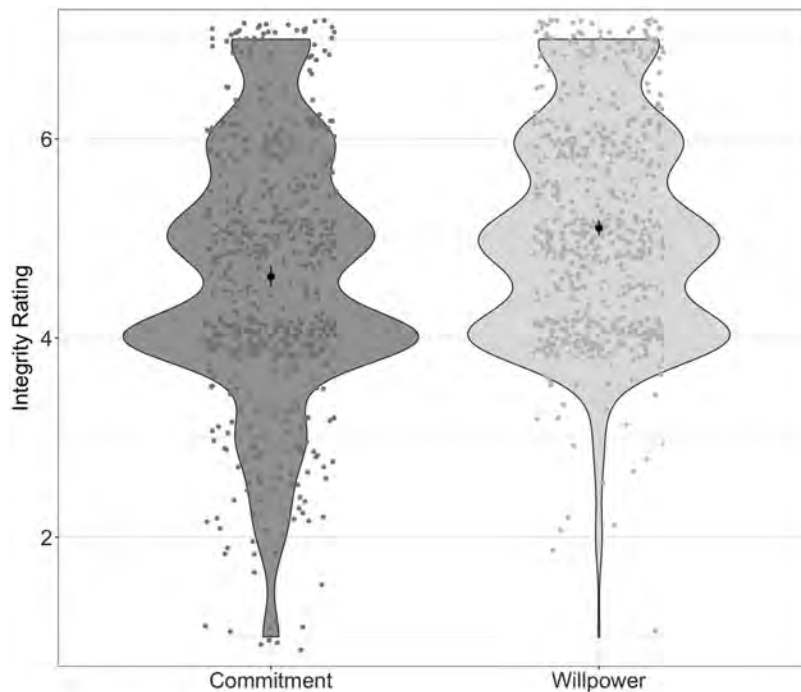
Study 2 provided a conceptual replication of Study 1 using a different measure of trust and a range of scenarios that differed on the type of commitment strategy used as well as the domain. Furthermore, we examined different components of trust, finding that the effect is more pronounced for integrity-based trust than benevolence-based trust. We also found an effect of strategy choice on inferences about moral character (see online Supplemental Material), which is not surprising given how closely morality and integrity are linked (Uhlmann et al., 2015). In all, Study 2 demonstrates that the choice to use a commitment strategy signals lower integrity compared with the choice to use willpower to achieve one's goals.⁴

Study 3

Study 3 seeks to clarify the boundaries of this phenomenon further. Specifically, we test whether it is the choice to use a commitment strategy or its actual use that signals one cannot be trusted. To do so, we manipulate what strategy a target chose to use to attempt to overcome a self-control problem independently of what

⁴ To rule out an alternative explanation that people have a specific positive association with the term “willpower,” we ran a supplemental study (Study S2 in the online Supplemental Material) asking participants to evaluate someone who chooses to use a commitment strategy vs. someone who “chooses not to use a commitment strategy” (i.e., without any mention of the use of willpower). We find similar results to Study 2, suggesting that participants are not simply reacting to the potentially positively charged concept of willpower; rather, these results demonstrate people distrust those who select commitment strategies even in the absence of any mention of willpower.

Figure 1
Impact of Target's Strategy Choice on Ratings of Integrity in Study 2



strategy that target actually ended up using. The preregistration for Study 3 is available at https://aspredicted.org/VY2_HWJ.

Method

Participants

Five hundred ninety-seven participants (42.5% female, 31.3% non-White; $M_{\text{age}} = 35.7$, $SD_{\text{age}} = 12.9$) from Prolific Academic took part in an online experiment in exchange for monetary payment.

Procedure

Participants were randomly assigned to read one of two vignettes regarding two individuals facing self-control problems. Half of the participants read about targets who each decided to use a different strategy:

Rory and Sam are both online workers. They both spend 6 hr a day completing tasks.

Rory decides to use internal willpower to stay focused and complete tasks.

Sam decides to use an app that blocks distracting websites (like Facebook, Instagram, etc.) across multiple devices to stay focused and complete tasks.

The other half of the participants were additionally told that the targets' attempted use of their chosen strategies were thwarted:

Rory and Sam are both online workers. They both spend 6 hr a day completing tasks.

Rory decides to use internal willpower to stay focused and complete tasks, but this week ends up working from a cafe where the internet blocks distracting websites (like Facebook, Instagram, etc.)

Sam decides to use an app that blocks distracting websites (like Facebook, Instagram, etc.) across multiple devices to stay focused and complete tasks, but this week the app is broken.

After reading the scenario, participants rated both Rory and Sam on the same integrity and benevolence scales described in Study 2.

Results

Effect of Strategy Choice on Integrity-Based Trust

Participants rated targets who chose to use a commitment strategy (whether or not they actually ended up using it) to achieve their goal as having significantly lower integrity-based trust than targets who used willpower, $\beta = -0.08$, $SE = 0.04$, $t(596) = -2.08$, $p = .038$.

Effect of Strategy Use on Integrity-Based Trust

There was no significant effect of actual commitment strategy use (regardless of what the target had previously chosen to use) on perceptions of integrity-based trust, $\beta = -0.03$, $SE = 0.04$, $t(596) = -0.93$, $p = .36$.

Interaction of Strategy Choice and Use on Integrity-Based Trust

There was no significant interaction of choice and actual usage on perceptions of integrity-based trust, $\beta = 0.27$, $SE = 0.14$, $t(595) = 0.19$, $p = .85$.

Discussion

Studies 1 and 2 implicitly tie together an individual's choice to use a specific strategy and their actual use of it. Separating these empirically, in Study 3, we find evidence that people are perceived as less trustworthy, not necessarily for using a commitment strategy per se but rather for displaying a preference for doing so. As such, Study 3 indicates that it is one's self-control strategy preference that signals information about his or her character rather than its actual use.

Study 4

Study 4 provides an initial examination of the proposed mechanism for this phenomenon. Specifically, we posit that the decision to use a commitment strategy to overcome a self-control problem signals to observers that the focal individual has not been successful in past attempts at overcoming similar problems. As such, Study 4 directly asks participants their beliefs about an individual's past success as a function of their strategy choice. In addition, we explore the degree to which strategy choice influences beliefs about an individual's chances of success on the focal task. The preregistration for Study 4 is available at https://aspredicted.org/blind.php?x=EGO_DDJ.

Method

Participants

Two hundred ninety-one participants (50.0% female; 26.1% non-White; $M_{\text{age}} = 33.1$, $SD_{\text{age}} = 11.8$) from Prolific Academic took part in an online experiment in exchange for monetary payment.

Procedure

All participants read the four scenarios (someone trying to go to the gym more, eat less junk food, consume less alcohol, or get a flu shot) presented in Study 2 in random order. In each scenario, participants read about two individuals. One individual chose to use willpower, and the other chose to use a commitment contract (where they would pay a friend \$5 if they failed to achieve their goal) to achieve their goal. Participants then answered the following three questions about their beliefs about each target's integrity, past success, and current achievement (1 = definitely the person who used willpower, 4 = both equally, and 7 = definitely the person who used the commitment device): "Who do you think has more integrity?" "Who do you think succeeded more in the past?" "Who do you think is more likely to achieve their goal?" Participants then completed a series of exploratory measures reported in the online Supplemental Material.

Results

Integrity-Based Trust

The average integrity score was 3.40 ($SD = 1.22$). A one-sample t test revealed that this was significantly lower than the midpoint of 4, $t(286) = -8.35$, $p < .001$, indicating participants believed the target who chose a commitment strategy had significantly lower integrity than the target who chose to use willpower.

Past Success

The average past success score was 3.30 ($SD = 1.43$). A one-sample t test revealed that this was significantly lower than the midpoint of 4, $t(287) = -8.36$, $p < .001$, indicating participants believed the target who chose a commitment strategy had been less successful in their past attempts at being self-controlled than the target who chose to use willpower.

Current Achievement

The average achievement score was 4.38 ($SD = 1.46$). A one-sample t test revealed that this was significantly higher than the midpoint of 4, $t(288) = 4.42$, $p < .001$, indicating participants believed the target who chose a commitment strategy would be more likely to achieve their current goal than the target who chose to use willpower.

Relationship Between Integrity-Based Trust and Success

As a preliminary examination of our proposed mechanism, we explore the relationship between past success and integrity, as well as between current achievement and integrity. Both inferences about past success, $\beta = 0.63$, $SE = 0.06$, $t(283) = 10.21$, $p < .001$, and inferences about current achievement, $\beta = 0.60$, $SE = 0.06$, $t(284) = 9.48$, $p < .001$, were significantly correlated with integrity-based trust. A regression model with integrity regressed on both past success and current achievement additionally revealed a significant relationship between past success and integrity, $\beta = 0.42$, $SE = 0.07$, $t(281) = 5.77$, $p < .001$, and current achievement and integrity, $\beta = 0.34$, $SE = 0.07$, $t(281) = 4.61$, $p < .001$.

Discussion

Using a bipolar scale directly contrasting commitment strategy choosers with willpower choosers, we replicate our main findings that people believe those who opt for willpower have more integrity than those who opt for a commitment strategy. We also provide initial evidence that people view the choice to use a commitment strategy as a signal of past self-control failure. Interestingly, although people negatively evaluate commitment strategy choosers for their decision, they recognize that the use of a commitment strategy itself is efficacious for achieving a goal. That is, they believe that commitment strategy users are more likely to achieve their present goal than willpower users. We return to this point in the General Discussion section.

Study 5a

In Studies 5a and 5b, we further explore the proposed mechanism that strategy choice differentially signals success in overcoming prior self-control problems. Providing convincing evidence for a given mechanism is notoriously difficult (Bullock et al., 2010). As such, we employ two methods from prior literature. First, Study 5a uses a measurement-of-mediation design to establish an indirect effect of strategy choice on perceptions of integrity-based trust via beliefs about past success. Second, Study 5a provides the first step in an experimental-causal-chain design (Spencer et al., 2005); namely, it establishes the causal effect of the independent variable on the proposed mediator. Study 5b tests the second step of the

experimental-causal-chain design: that an experimental manipulation of the proposed mediator has a causal effect on the dependent measure. The preregistration for Study 5a can be found at https://aspredicted.org/RB7_3XQ, and the preregistration for Study 5b can be found at https://aspredicted.org/NS7_B7N.

Method

Participants

Three hundred ninety-eight participants (45.0% female; 26.1% non-White; $M_{\text{age}} = 41.5$, $SD_{\text{age}} = 12.3$) from Amazon Mechanical Turk took part in an online experiment in exchange for monetary payment.

Procedure

Participants all read the following:

Rory and Sam are both online workers who want to complete 100 tasks in the next week.

Rory chooses to use internal willpower to stay focused and complete MTurk tasks.

Sam chooses to use an app that blocks distracting websites (like Facebook, Instagram, etc.) across multiple devices to stay focused and complete MTurk tasks.

Participants were then randomly assigned to answer questions about either Rory or Sam (in counterbalanced order). First, participants responded to the three-item integrity-based trust measure from Study 2. Second, participants responded to a single item assessing perceptions of past performance: "How likely is it that [Rory/Sam] failed or succeeded in achieving these work goals in the past?" (1 = definitely failed, 4 = equally likely to have failed or succeeded, 7 = definitely succeeded).

Results

Integrity-Based Trust

As predicted, participants rated targets who chose to use a commitment strategy to achieve their goal as having significantly lower integrity-based trust than targets who chose to use willpower, $\beta = -0.28$, $SE = 0.10$, $t(396) = -2.80$, $p = .005$; see Figure 2.

Past Performance

As predicted, targets who chose to use a commitment strategy were rated as significantly less likely to have succeeded in the past than targets who chose to use willpower, $\beta = -0.29$, $SE = 0.10$, $t(396) = -2.93$, $p = .004$.

Relationship Between Past Performance and Integrity-Based Trust

We found a significant correlation between perceptions of past success and beliefs about the target's integrity-based trust. Specifically, greater past success was significantly positively associated with higher levels of integrity-based trust, $\beta = 0.31$, $SE = 0.03$, $t(396) = 9.02$, $p < .001$.⁵ This effect held when

controlling for strategy choice, $\beta = 0.40$, $SE = 0.04$, $t(395) = 8.69$, $p < .001$.

Measured Mediation Analysis

Finally, we examined whether the change in perceptions of past performance statistically mediates the effect of strategy choice on integrity. To test this hypothesis, we fit a mediation model (with 5,000 bootstrapped iterations) using the Lavaan package in R (Rosseel, 2012). The independent variable was strategy choice (0 = commitment strategy, 1 = willpower), the mediator was perceived past performance (with a higher number indicating greater likelihood of past success), and the dependent variable was integrity-based trust. We find a significant indirect effect of strategy choice on perceptions of integrity-based trust via perceptions of past performance (indirect effect = 0.13, $SE = 0.04$, 95% CI [0.05, 0.22], $p = .003$).

Discussion

In Study 5a, we demonstrate that people believe those who choose to use a commitment strategy were less successful in their past endeavors than those who choose to use willpower. Using a measurement-of-mediation approach, we find that being seen as less successful in the past is correlated with perceptions of lower integrity and that there is a significant indirect effect of strategy choice on integrity via perceptions of past performance. Finally, because Study 5a demonstrates the causal effect of strategy choice on perceptions of past success, it provides evidence for the first step in an experimental-causal-chain approach to assessing the proposed mechanism. Thus, Study 5b tests the second step in this approach.

Study 5b

Study 5b further investigates the potential mechanisms underlying the negative impressions people form about individuals who use commitment strategies instead of willpower to achieve their goals. In Study 5b, we employ the second half of an alternative approach to mediation that addresses some of the concerns with measured mediation (Spencer et al., 2005): a causal chain design. Study 5a showed causal evidence that a target's choice to use a commitment strategy led to inferences that the target had failed in past self-control attempts. Study 5b manipulates past success and demonstrates its causal effect on perceptions of integrity-based trust.

Method

Participants

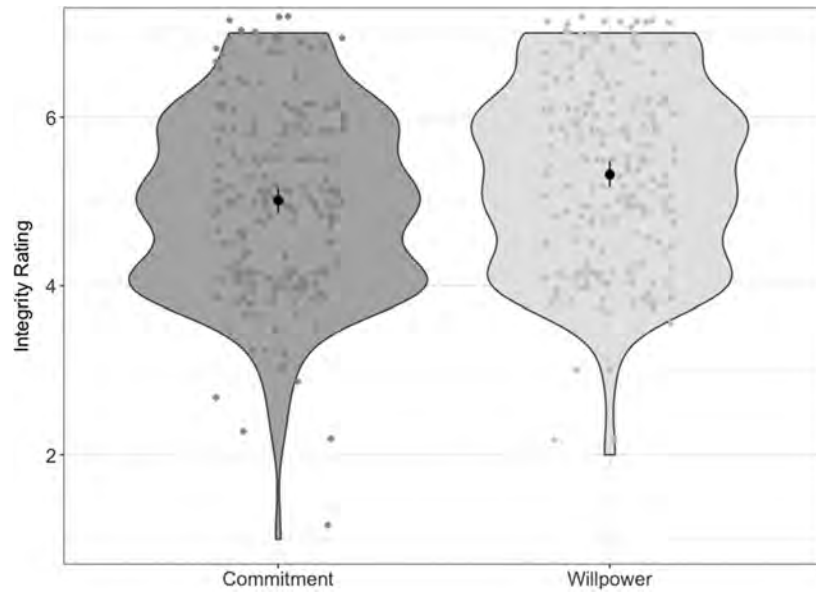
Three hundred participants (48.3% female; 22.0% non-White; $M_{\text{age}} = 41.2$, $SD_{\text{age}} = 12.1$) from Amazon Mechanical Turk took part in an online experiment in exchange for monetary payment.

Procedure

Participants read a vignette adapted from the one used in Study 5a:

⁵ Note that although this association is correlational, in Study 5b, we evaluate the causal impact of past performance on integrity-based trust.

Figure 2
Impact of Target's Strategy Use on Ratings of Integrity in Study 5a



Rory and Sam are both online workers who want to complete 100 tasks per week.

Rory succeeded in achieving their goal of completing 100 tasks last week.

Sam did not succeed in achieving their goal of completing 100 tasks last week.

Participants were randomly assigned to rate one of the two targets above (Rory, who had succeeded in the past, or Sam, who had failed

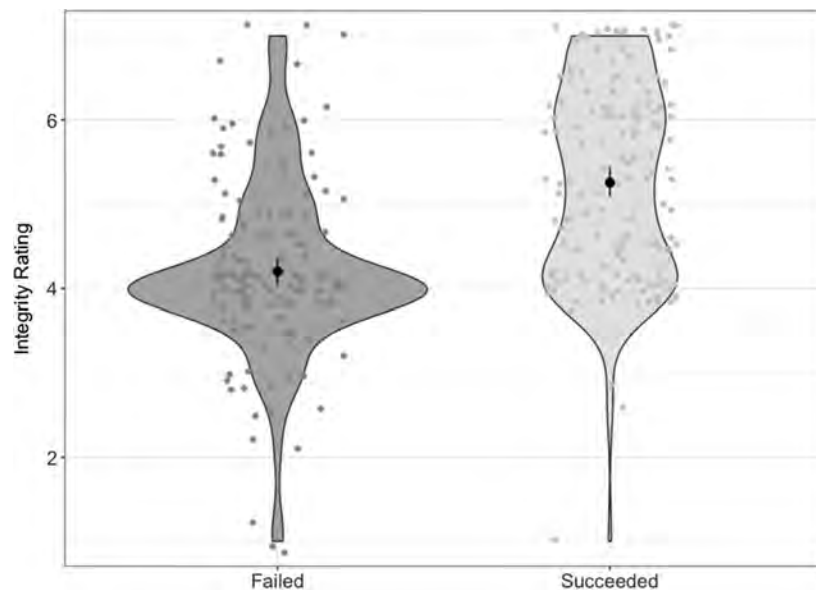
in the past) on the same three-item measure of integrity from Study 5a.

Results and Discussion

Integrity-Based Trust

Consistent with expectations, a linear regression revealed a strong effect of previous success on perceptions of integrity, $\beta = 0.87$, $SE = 0.10$, $t(298) = 8.40$, $p < .001$; see Figure 3. In other words, when

Figure 3
Impact of Prior Success on Ratings of Integrity in Study 5b



someone has failed at a task in the past, people believe that they have less integrity. This provides evidence for the second half of the causal chain design; that is, that inferences about past self-control success underlie the relationship between self-control strategy choice and perceptions of integrity.

Study 6

Studies 1 through 5b examined beliefs about self-control strategy choice from a third-party perspective; that is, these studies looked at others' impressions of an individual based on their strategy choice. Study 6 shifts to the decision-maker's perspective and investigates whether individuals anticipate the negative interpersonal consequences of commitment strategy choice when making decisions about what strategy to use. Specifically, we look at whether people are more likely to employ a commitment strategy when the decision will be kept private compared with when the decision will be made public. In doing so, we begin to explore an implication of the findings in this article—namely that anticipated negative evaluations by others may contribute to a reluctance to take up opportunities to use commitment strategies, particularly when the choice will be visible to others.⁶ The preregistration for Study 6 is available at https://aspredicted.org/blind.php?x=SZS_DPQ.

Method

Participants

Three hundred one participants (45.2% female; 22.6% non-White; $M_{\text{age}} = 44.5$, $SD_{\text{age}} = 12.8$) from Amazon Mechanical Turk took part in an online experiment in exchange for monetary payment.

Procedure

Participants were randomly assigned to read about one of three commitment strategies: a commitment contract website, a web-blocker application, or a lock box. In the commitment contract scenario, participants read:

There is a website that allows you to make a "commitment contract" to stick to your goals. You can create a goal and then give the website your credit card details. If you fail to reach your goal then the website automatically donates money to either to a charity you support or a charity you do not support. You can select the amount of money to put on the line and whether you want your money to go to a charity you support or do not support if you fail to reach your goal.

In the web-blocker scenario, participants read:

There is an app you can download that can block tempting websites (like Facebook or YouTube) across all of your devices during working hours that you set.

In the lock box scenario, participants read the following and then were shown a photo of the lock box:

Below is a photo of a product that helps people with self-control. For example, you can put cookies into the lock box, and then set a timer, so that you can only access the items in the box for a certain amount of time each day.

Participants next answered two questions (the order was counter-balanced across participants): "How likely are you to use this [website/app/lock box] if you knew that *other people would find out* that you used it?" and "How likely are you to use this [website/app/lock box] if you knew that *nobody would find out* that you used it?" These were answered on a 5-point Likert scale ranging from *very likely* (coded as 2) to *very unlikely* (coded as -2). Then, participants were faced with a final, forced choice question: "Assuming you had to use this [website/app/lock box], under which condition would you prefer to?" Participants could select either when the decision would be kept private or made public.

Results

Strategy Preference

When the decision would be kept private, participants were fairly unlikely to use the commitment strategy ($M = -0.37$, $SD = 1.34$), with an average rating significantly below the midpoint, $t(300) = -4.74$, $p < .001$. However, when the decision would be made public, participants were significantly less likely to use the commitment strategy than when it would be kept private, $M = -0.63$, $SD = 1.27$, $\beta = -0.20$, $SE = 0.04$, $t(300) = -4.75$, $p < .001$, using a mixed-effects linear model including random intercepts for participants and scenario-fixed effects. This preference to use a commitment strategy in private rather than in public was true for the web blocker, $\beta = -0.23$, $SE = 0.07$, $t(100) = -3.49$, $p = .001$ and lock box, $\beta = -0.29$, $SE = 0.07$, $t(99) = -3.94$, $p < .001$, scenarios but not for the commitment contract scenario, $\beta = -0.07$, $SE = 0.08$, $t(99) = -0.91$, $p = .36$. It is possible that, because people were already particularly unlikely to use the commitment contract to begin with, there may have been a floor effect for this particular scenario. Table 2 summarizes these results by scenario.

Strategy Choice

Overall, 78% of participants preferred to use the commitment strategy in private compared to in public, which was the majority by a significant margin ($\chi^2 = 94.89$, $p < .001$). Broken down by scenario, the percent of participants who preferred to use the commitment in private was 71% in the commitment contract scenario ($\chi^2 = 17.64$, $p < .001$), 82% in the lock box scenario ($\chi^2 = 40.96$, $p < .001$), and 81% in the web-blocker app scenario ($\chi^2 = 39.30$, $p < .001$).

Discussion

Across all three scenarios examined in this study, participants were at least somewhat hesitant to use commitment strategies, regardless of whether their decision would be public or private. However, consistent with the notion that people anticipate the negative interpersonal consequences of commitment strategies, participants expressed stronger hesitancy if the decision would be made public compared to if it were kept private. The general preference against commitment strategies, even when their use would be kept private, indicates that there are additional concerns fueling the underuse of effective commitment strategies.

⁶ We should note that this study does not directly test this implication but is consistent with this interpretation.

Table 2*Effect of Decision Context on Commitment Strategy Use and Difference From Midpoint (Overall and by Scenario) in Study 6*

Scenario	Private		Public		Average difference (private - public)
	<i>M (SD)</i>	Difference from midpoint	<i>M (SD)</i>	Difference from midpoint	
All	-0.37 (1.34)	$t(300) = -4.74, p < .0001$	-0.63 (1.27)	$t(300) = -8.59, p < .0001$	0.26
Commitment contract	-0.67 (1.26)	$t(99) = -5.30, p < .0001$	-0.76 (1.20)	$t(99) = -6.34, p < .0001$	0.09
Web blocker	-0.16 (1.32)	$t(100) = -1.21, p = .230$	-0.46 (1.28)	$t(100) = -3.56, p < .001$	0.30
Lock box	-0.27 (1.38)	$t(99) = -1.95, p = .054$	-0.67 (1.31)	$t(99) = -5.11, p < .0001$	0.40

General Discussion

The knowledge that people can use external commitment strategies to overcome self-control problems has existed in some form for thousands of years. Since at least the time of Homer and *Odysseus*, the focus has primarily been on the efficacy of these strategies for the person choosing to engage in them. This prior work has demonstrated, for example, that *Odysseus* made the right decision to tie himself to the mast rather than attempting to use willpower to resist the sirens in the moment (e.g., Ashraf et al., 2006).

However, what has gone largely unexamined until now is whether there are interpersonal consequences to these otherwise-helpful strategies. What did *Odysseus*'s crew think about his decision to eschew willpower in favor of an external aide? Our findings suggest that individuals who choose to use commitment strategies are often seen as less trustworthy, particularly with regard to integrity-based trust. These negative perceptions of commitment strategy users vis-à-vis willpower users persist even in cases where individuals recognize the efficacy of the commitment strategies (as demonstrated in Study 4). We further provide evidence that this effect is at least partially driven by the fact that people believe those who opt for commitment strategies were less successful in past goal achievement attempts than those who opt for willpower.

Theoretical Implications

Our work makes a few theoretical contributions. First, we add to the self-control literature. This has been an active field of research for over half a century, with psychologists such as Walter Mischel recognizing early on the effectiveness of different types of self-control strategies (H. N. Mischel & Mischel, 1987). However, much of the ensuing work in this domain has considered "self-control" as synonymous with "willpower" (Duckworth & Kern, 2011; Inzlicht et al., 2014; Lian et al., 2017; Metcalfe & Mischel, 1999). Only recently have there been attempts to systematically distinguish between internal willpower and external self-control strategies (Ainslie, 2021; Bermúdez et al., 2023; Duckworth et al., 2016, 2019; Gennara et al., 2023; Inzlicht et al., 2021; A. S. Kristal & Zlatev, 2021). This article contributes to this discussion by demonstrating that people evaluate these different categories of self-control strategies differently, providing corroborating evidence for their distinctiveness.

Second, we contribute to a growing literature examining what signals people use to evaluate others' trustworthiness (e.g., Dorison et al., 2022; Zlatev, 2019). Though previous work has demonstrated that increased self-control can lead to greater perceptions of trustworthiness (Righetti & Finkenauer, 2011), this work did not distinguish between different types of self-control

strategies—namely the use of internal approaches (e.g., willpower) compared to external approaches (e.g., commitment strategies). We demonstrate that, beyond simply using self-control or not, the way in which one demonstrates self-control impacts how trustworthy they appear to others. Moreover, our work focuses on the signal the decision to engage in a self-control strategy sends, as opposed to the actual use of such a strategy. As we demonstrated in Study 3, it is the preference to use a commitment strategy, not necessarily its actual usage, that impacts trust perceptions. In other words, we find evidence that people are penalized not for their use of a commitment strategy per se but rather for having a preference for using one. Therefore, our work demonstrates that people are evaluated not just by whether their attempt to behave in a self-controlled way succeeds or fails but also by the process by which self-control strategies are decided upon.

Relatedly, our research suggests—though it does not empirically demonstrate—that the decision to use internal willpower may reflect a greater confidence in one's own ability to be self-controlled. When one chooses to use an external commitment strategy to overcome a self-control problem, it may signal uncertainty in one's ability to succeed on one's own (which may or may not be reflective of reality). This lack of confidence might be interpreted by others as the individual indicating that they do not trust themselves, which could lead others not to trust them either. This possibility raises additional questions regarding the relationship between one's actual self-control ability, one's confidence in one's ability, and others' evaluations of that confidence (Anderson et al., 2012).

Finally, as demonstrated in Study 6, people appear particularly hesitant to adopt commitment strategies when their use will be made public. Although we provide evidence that anticipated interpersonal consequences may play a role in this effect, self-reported resistance to using commitment strategies remains high even when their use will be kept private. This occurs despite the fact that people can recognize and acknowledge the benefits of commitment strategies (e.g., in Study 4). Thus, we contribute to the literature on failures to adopt commitment strategies (Giné et al., 2010; Marotta & Acquisti, 2017; Moser et al., 2019; Royer et al., 2015) in two ways. First, we identify a novel barrier to uptake—anticipated damage to one's reputation. Second, we highlight that there are other, potentially unexplored, barriers to commitment strategy adoption worth also considering.

Practical Implications

A conclusion one might draw from the voluminous literature demonstrating the intrapersonal advantages of commitment strategies is that these tactics are unequivocally positive and thus always

preferable to the alternative. We show that, in fact, there are real consequences to being seen as the type of person who chooses to use a commitment strategy to overcome temptation. Being seen as untrustworthy can harm one's social relationships (Rempel et al., 1985) as well as economic outcomes (Balliet & Van Lange, 2013). As a result, while using commitment strategies may have first-order benefits, it is important to keep in mind that they may simultaneously have second-order drawbacks. The current work, however, does suggest one way to lessen the negative impact of addressing self-control problems with commitment strategies. In particular, communicating prior success in one's goal achievement may mitigate the interpersonal consequences of commitment strategy use. This presents a promising path toward identifying win-win self-control tactics that are both effective and widely accepted.

This work also suggests that judgments about a target's morality and trustworthiness are influenced by their internal preferences surrounding how to deal with internal conflict. Study 4, as well as supplementary analyses of Study 2, demonstrate that people recognize that commitment strategy users are more likely to achieve their goals but still believe they have less integrity as a result of their decision. This finding bolsters the claim that people use others' autonomous decisions as indicative of their internal traits. This is in line with previous work finding that people judge others' morality less on the outcomes of their decisions and more on what led to those outcomes as well as what the decisions say about the type of person they are (Cricher et al., 2020; Tannenbaum et al., 2011; Uhlmann et al., 2015).

This has important implications for the structure of programs and initiatives whose goal is to increase the uptake of commitment strategies. This is especially true because, as we have demonstrated in Study 6, people are sensitive to whether their decision to use a commitment strategy will be public or private. For example, people may avoid signing up for a program such as <https://www.stickK.com>, where people set up commitment contracts to help reach their goals, not because they do not think it would be helpful but rather because they are afraid of what others might think of their choice to do so. Designing these programs to minimize the interpersonal consequences of engaging in them may help increase their use.

Limitations and Future Directions

Across seven main (and two supplementary) studies, we demonstrate that the type of self-control strategy one uses can influence interpersonal perceptions of trustworthiness. Though we obtain these results using both self-reported and behavioral measures, a key limitation of this research is that it is primarily scenario-based. Future research should investigate the interpersonal consequences of commitment strategy use in more applied settings.

We also consciously limited our research to an American sample because we predicted that lay beliefs about the value of willpower would be particularly strong in countries with high levels of Protestant work ethic and Judeo-Christian beliefs. However, as discussed earlier, recent work has found that delay of gratification is also valued as a form of reputation management among children in China (Ma et al., 2020). This suggests that the desire to be seen as self-controlled by others spans these cultural differences. As a result, future research should examine if this effect holds, or how it may

differ, in cultures that may have different norms regarding when and how willpower is valued.

We also limited our research to goal achievement situations where individuals face want/should conflicts in more traditional self-control domains, such as being healthy and completing work-related tasks (Bazerman et al., 1998; Milkman et al., 2008). As such, we did not explore the effect of strategy use in dealing with more strongly moralized failures (e.g., someone using a commitment strategy to prevent themselves from cheating on their spouse or abusing animals). However, it seems likely that the interpersonal costs of using a commitment strategy, particularly those regarding integrity-based trust, would be even stronger in these domains.

Moreover, although we test a variety of different commitment strategies and observe minor differences between them, we do not systematically evaluate different types of commitment strategies. Additional research is needed to understand how various features of commitment strategies (e.g., how unusual a strategy is or whether it has a social component) are perceived by potential users and third-party observers—and whether and how these features differentially affect interpersonal evaluations.

Conclusion

Self-control is an important feature of everyday decision making. Yet until recently, research has often conflated willpower (a specific strategy) with self-control (a desired outcome). We demonstrate not only that internal willpower is merely one means of achieving self-control but also that those who choose to use it are viewed more favorably than those who choose to use external commitment strategies. By examining the role of interpersonal judgments in self-control strategy choice, we can begin to understand why people may fail to adopt these beneficial strategies and how to better promote effective strategy use.

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