

Signaling benefits of partner choice decisions

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Abstract

When deciding whom to choose for a cooperative interaction, two features of prospective partners are especially relevant: Ability to provide benefits, and willingness to provide those benefits. Often, these traits are correlated. But, when ability and willingness are in conflict, people often indicate that they value willingness over ability, even when doing so results in immediate losses. Why would such behaviour be favored by natural selection acting at the level of the individual? Across 9 experimental studies (7 preregistered) and a mathematical model we explore one way of explaining this costly choice, demonstrating that choosing a willing over an able partner affords one a moral reputation and makes one more likely to be chosen as a cooperation partner. In fact, even people who choose an able over a willing partner for themselves prefer others who choose a willing over an able partner. Crucial to our model, we find that valuing willingness over ability is an honest signal of both higher levels of generosity in an economic game and lower levels of trait Machiavellianism. These findings provide the first extensive exploration of the signaling benefits of partner choice decisions. Furthermore, this work provides one explanation for why we choose those who are willing over those who are able, even at a cost to ourselves: By doing so, we in turn look like good potential partners.

Keywords: signaling; partner choice; cooperation; morality; evolution

Introduction

Humans are a remarkably cooperative species, interacting with distant others and non-kin. The success of these cooperative interactions is an area of active interest (Boyd & Richerson, 1992, 2005; Henrich, 2015; Henrich & Henrich, 2007; McCullough, 2020; Richerson & Boyd, 1998; 2005; Wrangham, 2019). One mechanism for building and maintaining cooperative interactions is partner choice: We choose the best partners and avoid those who are bad (Bull & Rice, 1991; Baumard, Andre, & Sperber, 2013; Barclay, 2013, 2016; Barclay & Willer, 2007; Fu, Hauert, Nowak, & Wang, 2008; Noë & Hammerstein, 1994; for a recent review see Martin, Young, & McAuliffe, 2019). Often, the best partner is someone who is *able* to deliver resources or benefits. However, individuals sometimes choose to forgo partnering with able individuals and instead partner with those who are most *willing* to provide benefits (Barclay, 2013, 2016; Eisenbruch & Roney, 2017; Macfarlan & Lyle, 2015), even when this choice carries immediate cost (Raihani & Barclay, 2016). While such partner choice decisions help promote group cooperation (Barclay & Willer, 2007), why would such behaviour be favored by natural selection acting at the level of the individual? Furthermore, why do people often claim to value “niceness” in friends and romantic partners more than they actually do value it? We provide one explanation for both phenomena: Such decisions carry signaling benefits.

Preferences for *able* partners (i.e. a partner who possesses valued personal traits—such as wealth, health, or high status in other forms—which grant the ability to benefit others) are found across both large- and small-scale societies, where people who exhibit the ability to deliver benefits receive both social and material benefits in return (Eisenbruch & Roney, 2017; Eisenbruch, Grillot, Maestripieri, & Roney, 2016; Gurven, Allen-Arave, Hill, & Hurtado, 2000; Macfarlan & Lyle, 2015). For example, those who signal their wealth through conspicuous

consumption are more likely to be hired and obeyed (Nelissen & Meijers, 2011), those who appear healthy are more likely to be trusted (Krupp, DeBruine, & Jones, 2011), and those who are skilled are more likely to receive deference (Henrich & Gil-White, 2001). Also, when choosing a romantic partner, men with higher earning capacity are more likely to be chosen as a romantic partner by women (Buss, 1989). Furthermore, both men and women place great importance on their romantic partner's levels of physical attractiveness (Buss, 1989), particularly if the goal is for a short-term partnership (Fletcher et al., 2004; Li & Kenrick, 2006).

At the same time, exhibiting a *willingness* to cooperate (i.e. actual or expressed willingness to reciprocate or participate in mutually beneficial endeavors) also affords many social and material benefits. In hunter-gatherer populations, generous hunters are favoured as hunting partners, often over the most skillful hunters (Bird & Power, 2015; Bird, Scelza, Bird, & Smith, 2012). In agriculturalist societies, those who are seen as more cooperative also tend to have a greater number of social connections (Lyle & Smith, 2014; Macfarlan, Quinlan, & Remiker, 2013; Macfarlan, Remiker, & Quinlan, 2012). In online markets, sellers with a reputation of being honest are more likely to be patronized over those who lack such a moral reputation (Diekmann, Jann, & Przepiorka, 2014). In economic games, many people prefer to partner with those who previously behaved fairly over those who have the most money (Hackel, Doll, & Amodio, 2015; Raihani & Barclay, 2016). And, comparing preferences for friends (Vigil, 2007), employment opportunities and work teams (van Prooijen & Ellemers, 2014), roommates, business partners, and romantic partners (Kafashan, 2017), reveals that a high level of willingness is valued more than a high level of ability.

It is perhaps not surprising that people value both ability (e.g. wealth, popularity) and willingness (e.g. generosity, kindness) when choosing a cooperation partner. What may be more

surprising is that, when forced to make a choice between ability and willingness, some people forgo the opportunity to partner with an able partner in favor of a partner who appears more willing (Barclay, 2013, 2016; Eisenbruch & Roney, 2017; Macfarlan & Lyle, 2015), even when they know they will likely benefit more, in material terms, from partnering with the able partner (Raihani & Barclay, 2016). For example, across such research, a sizable proportion (sometimes the majority and sometimes a large minority) of participants choose to partner with those who give a larger share of what they have rather than those who give more in absolute terms (but a smaller share of what they have).

Why would people choose willing partners when the expected economic payoff of choosing able partners is greater? This behavior is even more puzzling given that generosity appears to be an unstable trait within an individual (although perhaps more stable than ability; Eisenbruch & Krasnow, 2019) that varies greatly depending upon the social context (Smith, Larroucau, Mabulla, & Apicella, 2018; but see, Peysakhovich, Nowak, & Rand, 2014). Thus, not only is the expected payoff less if one chooses a willing partner, but one cannot even be certain that a willing partner will continue to act willingly in future interactions.

Furthermore, people often claim to prefer willing or cooperative partners, even when in fact they do not. For example, people often claim to value niceness in their friends, when in practice they may pass over “nice people” in favour of more popular or attractive but meaner peers (Eisenbruch & Roney, 2020; Huang, Ledgerwood, & Eastwick, 2020). Similarly, Buss and colleagues (1990) found that people across the globe claim that “kindness and understanding” is the most important trait in spouses, but in practice people may often value physical attractiveness more (Eastwick & Finkel, 2008; Kurzban & Weeden, 2005; Todd et al., 2007). People may also claim to value cooperative co-workers or employees, and to dislike co-workers who exploit

others, but in practice they may keep working with highly objectionable people who are sufficiently talented, wealthy, or powerful. Why might people claim to value cooperativeness much more than they actually do value it?

Costly Signaling Theory

To explain why people make the costly decision to value willing over able partners – or claim to value willing partners so much - we consider an ultimate explanation for such preferences while also exploring proximate influences. Ultimate explanations can be distinguished from proximate explanations in that they attempt to answer the ultimate question of why certain behaviors exist rather than explaining the immediate mechanism driving such behavior (Tinbergen, 1963). In particular, we investigate what is being signalled when one chooses a particular partner. We posit that the costly decision to partner with a willing partner signals that the chooser is of sufficient moral quality to bear the cost of not partnering with the able partner (Barclay & Reeve, 2012; Getty, 2006; Gintis, Smith, & Bowles, 2001; Grafen, 1990; Spence, 1973; Zahavi, 1975). Because of this reputation, short-term costs are partly recouped when such choosers are themselves chosen more often by others (especially by others who are also more generous) as a cooperation partner, thereby affording the various fitness benefits of social connection. In the long run, these social (and associated material) benefits could help offset the cost of not partnering with the able partner. But why should choosing a willing over an able partner signal moral goodness? In other words, what are the strategic costs of out-of-equilibrium play that make it beneficial for moral types, but not immoral types, to choose willing over able partners? Costly signaling theory posits that the action producing the signal has to be differentially costly/beneficial for different types of individuals; the variance in costliness is what allows for it to serve as a signal (Gintis, Smith, & Bowles, 2001; Grafen, 1990; Roberts, 1998;

Spence, 1973; Zahavi, 1975). More recent research has argued that a critical feature is that the cost of cheating or faking the signal needs to outweigh the benefits (Higham 2014; Szamado, 2012). Thus, in our framework immoral types should find it too costly to fake the signal of choosing a willing partner, while moral types should find it beneficial to engage in the costly act of choosing the willing partner. Why might this be the case?

We posit that immoral choosers are more likely to experience mutual defection in the long run with any partner they choose, because their immoral behavior will trigger defection from partners. As a result, a partner's ability to provide immediate benefits becomes far more relevant than their willingness to cooperate, because the latter is more relevant in the long term. In other words, it is not worthwhile for immoral choosers to gain a moral reputation by partnering with a willing partner because any partnership or reputation that an immoral chooser obtains will soon dissolve due to the immoral person's uncooperative behavior. The quick dissolution of a partnership with a willing partner, and the corresponding loss of reputation, coupled with the large opportunity cost of not partnering with an able partner makes the payoff structure such that it is optimal for immoral choosers to choose able partners. Consequently, immoral choosers should opt to reveal their character through their partner choice.

On the other hand, for moral choosers, mutual defection is far less likely to occur and therefore willingness becomes more relevant due to their relationship being more likely to persist into the long run. Thus, the benefits for moral types of i) a long-term relationship with a willing partner and ii) being seen as moral and being chosen more often by others should outweigh the benefits of partnering with an able partner. The payoff structure is such that it is optimal for moral choosers to choose willing partners, and consequently moral choosers will opt to reveal their character through their partner choice. Hence, we posit that a separating equilibrium may

exist where moral types value willingness over ability in their partners, and immoral types value ability over willingness in their partners.

Our conceptual model is analogous to the types of traits that are valued in romantic partners. When seeking long-term relationships, people value traits like good character, which are more beneficial in the long term than the short term. By contrast, when seeking short-term relationships, people value traits that they can immediately benefit from in a partner, such as higher physical attractiveness (e.g., Regan et al., 2000). Therefore, observers can make inferences about others based on what traits they value: if someone is only interested in a mate's physical attractiveness, it is a cue that they might not want a long-term relationship. If someone really values good character in romantic partners, it is a cue that they are interested in a long-term relationship. By analogy, in our conceptual model, observers can make inferences about others' cooperativeness based on whether they only value traits that are immediately beneficial (e.g., abilities) or are most beneficial in the long term (e.g., willingness, cooperativeness).

To provide empirical support for this conceptual model, in the following studies, we experimentally examine whether those who choose willing partners actually behave more generously in economic games (specifically the Dictator Game) and score lower on psychometric measures of immoral personality traits (i.e., Machiavellianism, narcissism, and psychopathy; Paulhus & Williams, 2002). We focus particularly on trait Machiavellianism because it is characterized by strategic manipulateness (Jones & Paulhus, 2014). Machiavellian individuals may initially appear to be attractive cooperation partners (Wilson, Near, & Miller, 1996), but over time their manipulative nature should lead to the deterioration of relationships (Lyons & Aitken, 2010). Indeed, previous research has shown that people who score high on trait Machiavellianism report having lower quality friendships (Lyons & Aitken, 2010) and also

report that a person's level of intelligence, physical attractiveness, or high social status (i.e. ability traits) are good reasons to choose someone as a friend (Jonason & Schmitt, 2012).

Furthermore, previous research has also shown that partnerships between a person low on trait Machiavellianism and a person high on trait Machiavellianism tend to lead to particularly poor outcomes on a cooperation task (Fry, 1985). With that said, we suspect that any measure of one's inclination to engage in behaviours that help solve puzzles of cooperation (Curry, Chesters, & Van Lissa, 2019; Curry, Mullins, & Whitehouse, 2019) would likely positively relate to valuing willingness in one's partner choice decisions.

If costly signaling theory accounts for the tendency to value willingness over ability when selecting partners, a tendency to choose willing partners should be linked to one's own generosity and moral personality. Furthermore, if such individuals are more likely to be generous and less likely to be immoral, this would support the idea that these individuals' relationships may be more likely to persist into the future, creating greater incentives for moral types to choose willing over able partners. To further substantiate this point, we also examine whether there is an increased preference for willing partners when people are considering long-term versus short-term relationships. Furthermore, costly signalling theory would also suggest that there should exist evidence of adaptive design in the psychology of the signaler such that when people choose partners they experience signaling concerns. Thus, we also examine i) whether people are aware of what is being signaled via their partner choice decisions, ii) whether people experience signaling concerns after choosing certain partners, and iii) whether people are sensitive to varying reputational incentives when making partner choice decisions. In the next section we present a simple model showing why partner choice decisions are indicative of cooperative intent.

Formal Model

In our verbal model above, we rely on an assumption: that people who choose more-willing but less-able partners will be more cooperative than people who choose less-willing but more-able partners. Here we present a simple mathematical model to support that claim, and to show *why* it is the case. This model is not meant to be a comprehensive signaling model, but merely a formal proof of concept and a formalization of our assumptions (see Muthukrishna & Henrich, 2018; Servedio et al., 2014 for the importance of mathematical models in psychology). In particular, our model shows that partner choice decisions are a cue of cooperative intent. Cues often evolve into signals once audiences start attending to those cues and actors start actively investing in them (Biernaskie et al., 2018).

We model a cooperative scenario as a repeated Prisoner's Dilemma-like game: two individuals are paired, and in each round each person can pay cost c to confer a benefit b upon her partner. After each round, there is a probability p of having another round with the same partner, so the total expected number of rounds (n) with a partner is $1/(1-p)$. If partners are conditional cooperators (e.g., Tit-for-Tat), then a cooperator will earn $b-c$ in each of the n rounds, or $n(b-c)$ in total (also written $(b-c)/(1-p)$). By contrast, a defector will earn b in the first round where it suckers its partner, and zero in all subsequent rounds once its partner retaliates with defection. The standard formula is that it pays to cooperate when:

$$(b-c)/(1-p) > b \quad \text{(Inequality 1)}$$

Which can be rearranged as:

$$pb > c \quad \text{(Inequality 2)}$$

Suppose that different individuals vary in their ability to provide benefits for partners, and in their willingness to do so (Barclay, 2013). The best partners are both willing and able to

help: if choosing between a more willing + more able partner versus a less willing + less able partner, everyone should choose the former. But imagine one must choose between two partners: a more able but less willing partner (henceforth the “able partner”, or “a”) or a more willing but less able partner (henceforth the “willing partner”, or “w”). By definition, the more able partner (a) provides more benefits than the willing partner (w) does: $b_a > b_w$. However, because they are less willing, that more able partner might not cooperate for as long – their lower willingness might cause them to stop cooperating, or they may switch partners to someone else of similar market value (assortative pairing, Barclay, 2013). Thus, interactions are less likely to continue each round with the able partner than with the willing partner ($p_a \leq p_w$), so the expected number of rounds is lower with an able partner than with a willing partner ($n_a \leq n_w$).

Whom should one choose: the more able but less willing partner (a), or the less able but more willing partner (w)? It depends on whether one is a cooperator or a defector. Defectors should always choose the able partner. Defectors need to extract what benefits they can immediately, because their partners will not cooperate in future rounds – their partner will cooperate in the first round only, and thereafter will retaliate with defection. Thus, a defector will receive b_a from the able partner or b_w from the willing partner in the first round, and zero in all subsequent rounds. Thus, for defectors it pays better to choose the able partner whenever $b_a > b_w$, which is always true by definition.

However, cooperators will sometimes choose the willing partner over the able partner if they anticipate more rounds with the former. The payoff for a cooperator to choose the willing partner is $n_w(b_w - c)$, whereas the payoff for a cooperator to choose the able partner is $n_a(b_a - c)$. It thus pays for a cooperator to choose the willing partner whenever:

$$n_w(b_w - c) > n_a(b_a - c) \quad (\text{Inequality 3})$$

Which can be rearranged as:

$$(b_w - c)(n_w/n_a) > (b_a - c) \quad (\text{Inequality 4})$$

In other words, if interactions with willing partners are expected to be longer than interactions with able partners, then this can counteract the temporary disadvantage of pairing with willing partners – but only for cooperators who will reap the benefits of long-term mutual cooperation. Cooperators are more likely to choose willing partners as: 1) interactions with willing partners become much longer than interactions with able partners (i.e., as n_w/n_a increases); 2) willing partners become more comparable in ability to able partners (i.e., as b_w becomes closer to b_a); and 3) the cost of cooperation gets lower (i.e., as c decreases). However, if Inequality 4 is not met, then even cooperators will prefer able partners because the benefits they provide are too great to forego.

In summary, defectors will always choose able partners over willing partners, whereas cooperators will sometimes choose willing partners over able partners. Thus, if someone chooses the more able partner, it doesn't necessarily say anything about the chooser's character. By contrast, if someone chooses the more willing partner, that choice is diagnostic of them being a cooperator because only a cooperator would ever do so. Thus, our model shows that choosing the willing partner is a cue of an actor's willingness to cooperate. Observers can use this cue to inform their own trust and partner choice decisions as they weigh the actor's willingness versus ability. Once observers start attending to actors' partner choice decisions, actors have an incentive to actively signal this by weighting partner willingness even more, i.e., the cue can evolve into a signal (for a discussion of cues evolving into signals, see Biernaskie et al., 2018; for similar discussions in related domains, see Barclay & Barker, 2020; Roberts, 2020).

Ability and Willingness

We follow previous research (e.g., Kafashan, 2017) by defining ability as having the resources to benefit others (e.g., athleticism, appearance, creativity, intelligence, popularity, wealth) and willingness as showing an inclination to benefit others (e.g., cooperativeness, friendliness, generosity, helpfulness, kindness, trustworthiness). Following previous research, across some of our studies we operationalized a willing partner as one who is relatively poor yet relatively generous and an able partner as one who is relatively rich yet relatively selfish (Raihani & Barclay, 2016). But we also examined comparisons between someone who is poor yet fair versus someone who is rich yet unfair; someone who is less skilled yet generous versus someone who is highly skilled but not generous; and someone who is unpopular yet kind versus someone who is popular yet unkind.

This comparison between willingness and ability follows previous research across various contexts that contrasts these two dimensions (Barclay, 2013, 2016; Cosmides, Guzman, & Tooby, 2019; Gangestad & Simpson, 2000; Macfarlane & Lyle, 2015; Martin, Seta, & Crelia, 1990; Raihani & Barclay, 2016; Smith & Apicella, 2019; Smith & Apicella, 2020; Vigil, 2007; Zabatany, Conley, & Pepper, 2004). With that said, this comparison does relate to other distinctions in social and personality psychology between agency/competence and communion/warmth (Abele, Cuddy, Judd, & Yzerbyt, 2008; Abele & Wojciszke, 2007; Digman, 1997; Fiske, 2012; Fiske, Cuddy, & Glick, 2007; Judd, James-Hawkins, Yzerbyt, & Kashima, 2005; Wiggins, 1991). This literature provides numerous examples of people evaluating others along two main dimensions: 1) does this person act in a cooperative way toward others and 2) is this person able to accomplish goals in life (e.g., Rosenberg, Nelson, & Vivekananthan, 1968). We view the terms of warmth/morality/communion and agency/competence as relating to the same two fundamental concepts: having a disposition to either help or harm versus having the

ability to either help or harm (Brambilla, Rusconi, Sacchi, & Cherubini, 2011; Brambilla, Sacchi, Rusconi, Cherubini, & Yzerbyt, 2012; Curry, Chesters, & Van Lissa, 2019; Goodwin, Piazza, & Rozin, 2014; Leach, Ellemers, & Barreto, 2007).

With regards to our dependent measures across studies, we rely on the person perception literature that compares the two aforementioned dimensions (Fiske, Cuddy, & Glick, 2007; Wojciszke, Abele, & Baryla, 2009). In particular, we measure what effect a person's partner choice decision has on that person's reputation of being both a moral, warm, and caring person as well as a logical and competent person. Additionally, in some of our studies we also measure people's perceptions of the action of choosing willing over able partners. We investigate judgments of praiseworthiness due to prior research highlighting how judgments of actors and judgments of actions can sometimes diverge (Uhlmann, Pizarro, & Diermeier, 2015) such that an action may seem praiseworthy, but the actor may not come across as a particularly moral and caring person, or vice-versa (Uhlmann, Zhu, & Tannenbaum, 2013).

Altogether this investigation provides an explanation for why people care so much about, or at least purport to care so much about, willingness traits (e.g., cooperativeness, friendliness, generosity, helpfulness, kindness, trustworthiness) in others relative to ability traits (e.g., athleticism, appearance, creativity, intelligence, popularity, wealth). We posit that despite this being a costly decision, people benefit by appearing as superior cooperation partners to observers.

Overview of Studies

Broadly, we test for evidence of four phenomenon across nine studies. See Figure 1 for a summary of each of the nine studies. First, we test for adaptive design in the psychology of the

receiver, by examining whether people interpret partner choice decisions as signals of moral character (Studies 1, 2, 3, 4, 8 & 9).

Hypothesis 1: Individuals who choose willing over able partners are seen as having a superior moral character.

Second, we test for adaptive design in the psychology of the sender, by examining a) whether people have reputational concerns when making partner decisions, and b) whether people's partner choice decisions are sensitive to reputational incentives (Studies 5, 6, 7, & 9).

Hypothesis 2a: Individuals are aware of the superior reputational benefits that are afforded to those who choose willing over able partners.

Hypothesis 2b: Individuals modulate their partner choice decisions based on the reputational incentives present in their environment.

Third, we test for honest signaling by examining whether people who choose willing over able partners are actually more cooperative (Studies 3, 6, 7, 8, & 9).

Hypothesis 3: Individuals who choose willing over able partners are more cooperative on behavioural and psychometric measures of cooperativeness.

Fourth, we test whether time horizons underlie this pattern, by examining whether people's partner choice decisions are sensitive to the length of the partnership (Studies 6 & 8).

Hypothesis 4: Individuals who are more likely to choose willing over able partners for long-term rather than short-term partnerships.

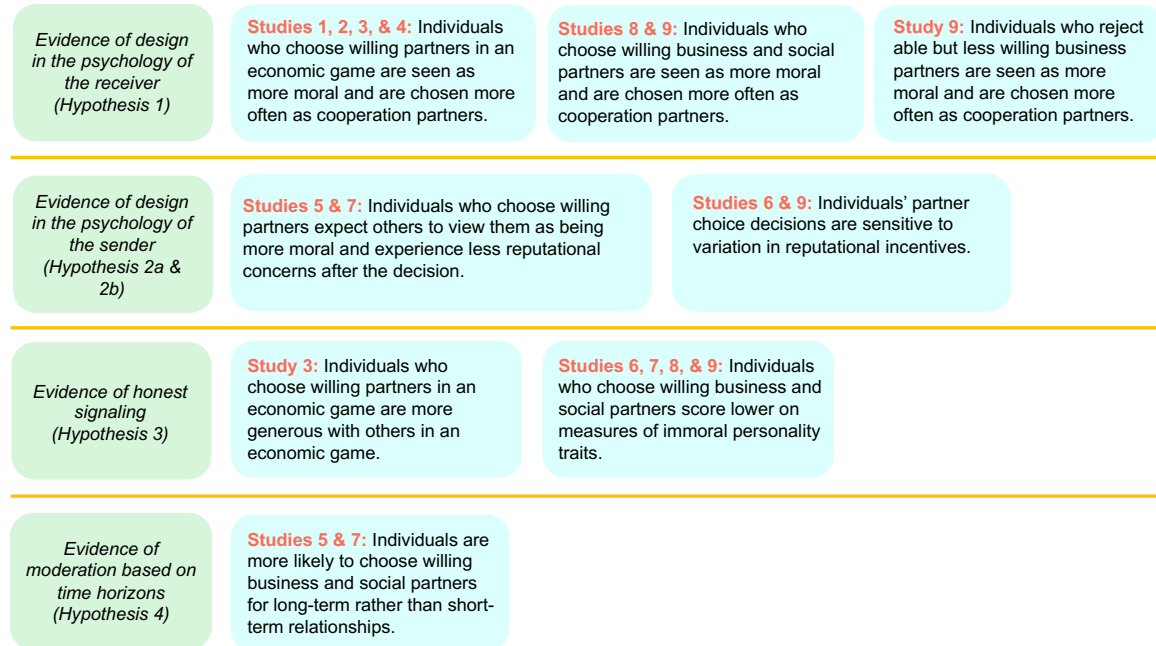


Figure 1. Summary of studies.

General Methods

Ethics Statement

All studies were approved by the Ethics Committee of Boston College with the IRB protocol number: 12.064.

Procedure

We investigated the roles of willingness and ability in the Dictator Game (DG) as well as across various contextualized vignettes. In Studies 1, 2, 3, 4, 5, 6, and 7 participants read about the behavior of other people in the DG and were asked to make evaluations of such people. In Studies 2 and 3 participants played an incentivized DG, in which participants earned a bonus payment depending upon their choice. Additionally, in Studies 6, 7, 8, and 9 we extrapolated the general features of the DG to real-world vignettes, namely when choosing business partners and social partners.

The specific steps of the DG were as follows. Note that only Study 2 entailed participants performing all of these steps in a fully incentivized experiment. In the majority of our studies we only had participants play the role of Evaluator while imagining the behavior of the other players (Deciders and Choosers) and making judgments of them based on their decisions in the game. Participants began by reading instructions for the DG, consisting of a single decision: The Decider has a sum of money and can choose how much of that money to share with the Receiver. Participants were then introduced to two Deciders and told that in a previous game one of these Deciders (able) had 250 monetary units and chose to share 50 monetary units with the Receiver, while the other Decider (willing) had 50 monetary units and chose to share 25 monetary units with the Receiver (see Step 1 in Figure 2). This ratio of monetary units follows previous research comparing ability and willingness (Raihani & Barclay, 2016). It is important to note that the willing partner is only relatively less able, not completely incapable. These two Deciders were then presented to participants with the able Decider again having 250 monetary units and the willing Decider having 50 monetary units (see Step 2 in Figure 2). Choosers were then asked to choose which Decider they would like to have as their Decider in a one-shot interaction. Other participants (Evaluator in the Figure 2) were asked to choose and evaluate both the original Deciders from Step 1 as well as the Choosers who chose one of the Deciders in Step 2 (see Step 3 in Figure 2). In Study 1, the monetary units were dollars, and in all subsequent studies the monetary units were cents.

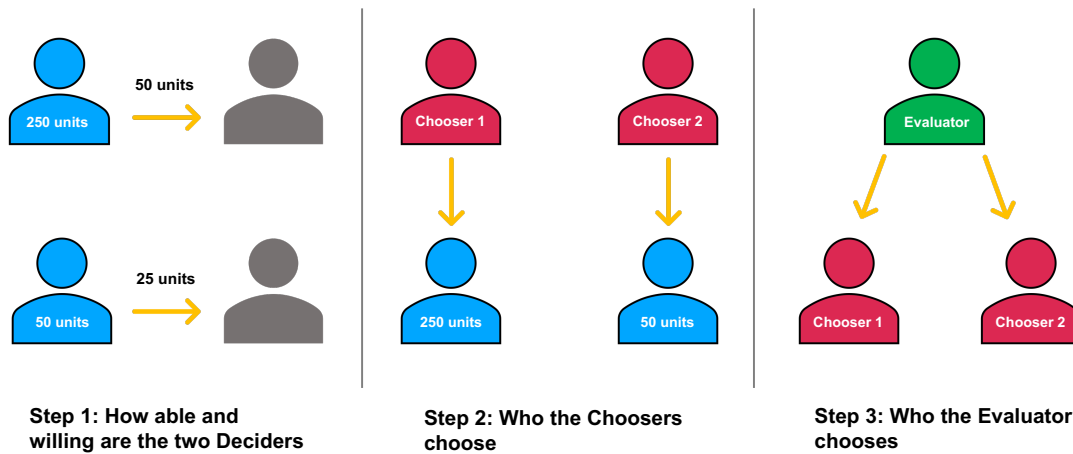


Figure 2. Graphical depiction of the three primary steps across studies.

To reiterate our theoretical model, we posit that the benefits for Chooser 2 of i) a long-term relationship with a willing partner (Decider B) and ii) the reputational and partner choice benefits from observers (Evaluator) outweigh the benefits of partnering with an able partner (Decider A), thus making it optimal for Chooser 2 to value willingness over ability. On the other hand, due to Chooser 1's immoral character, a relationship with a willing partner (Decider B) and the resulting positive evaluations from observers (Evaluator) would rapidly dissolve, thus making the immediate attainment of maximum utility from an able partner (Decider A) the optimal choice.

Exclusion criteria

Studies 3 through 9 included preregistered exclusion criteria (links provided in *Methods* section of each study). Excluded from data analysis were non-native English speakers, participants who reported paying low attention to the study (rating below 6 on a 7-point scale), participants who reported providing little or no thought to more than one question on the survey,

participants who failed the comprehension check, and participants whose average response times fell below three SD's of the log-transformed overall mean.

Data availability

All data and study materials are available at Open Science Framework: <https://osf.io/vmjqu/>

Study 1: Signaling Benefits of Choosing Willing Partners (Laboratory)

We began by asking whether participants prefer to partner with those who choose willing versus able partners, and whether this pattern is moderated by participants' own preferences for willing versus able partners. The decisions of which partners to choose in this study were hypothetical.

Methods

A total of 87 participants (45% Male; Mean age = 20.11, $SD = 1.16$) from a large North American university were recruited to participate. Participants were told about two Deciders: One Decider (able) who had \$250 and chose to transfer \$50 in a previous interaction, and another Decider (willing) who had \$50 and chose to transfer \$25 in a previous interaction. Participants were then asked 1) to choose which Decider they would like to have as their Decider in a new DG (in which the participant would be the Recipient), and 2) to rate both Deciders on how trustworthy and moral, how emotional and logical, and how warm and competent they seemed. We then created two indices: one index to capture the dimension of communion/morality (moral, trustworthy, emotional, and warm) and one index to capture the dimension of agency/competence. The order in which the decider choice and ratings were made was randomized.

Next, participants were told about two other participants who were given the same choice they were just given. One participant (i.e. Chooser) chose the able Decider (who transferred \$50 out of \$250), and the other participant (i.e. Chooser) chose the willing Decider (who transferred \$25 out of \$50). Participants were then asked 1) to choose which of these two Choosers they would like to have as their Decider in a new DG where each of the two Choosers would have \$100 (and the participant would be the Recipient), and 2) to rate both Choosers on a 7-point scale (1 = “not at all” to 7 = “extremely”) on how trustworthy, moral, emotional, logical, warm, and competent they seemed. We then again created two indices: one index to capture the dimension of communion/morality (moral, trustworthy, emotional, and warm) and one index to capture the dimension of agency/competence (logical and competent).

Results: Test of Hypothesis 1

We first examined participants’ own preferences for the Decider in the DG. Participants were more likely to choose to partner with an able Decider (66%) over a willing Decider (34%), $\chi^2(1) = 8.38, p = .004, w = .31$. At the same time, participants rated the able Decider as less moral ($M = 3.43, SD = 1.00$ vs. $M = 5.45, SD = .95$), $t(86)=13.31, p < .001, d = 2.07$ but more competent ($M = 4.91, SD = 1.17$ vs. $M = 4.28, SD = 1.20$), $t(86)=3.54, p = .001, d = .53$, suggesting that moral character ratings and partner choice decisions can sometimes diverge.

Next, we examined participants’ second-order decisions: their decision of which Chooser they want to be the Decider for a DG after learning who that individual previously chose as a partner. Here, opposite to their first-order decisions, participants were more likely to choose someone who chose a willing Decider (68%) over an able Decider (32%), $\chi^2(1) = 11.05, p = .001, w = .36$. Participants also rated those who chose a willing Decider as more moral ($M =$

4.74, $SD = 1.00$ vs. $M = 3.79$, $SD = .98$), $t(86)=5.47$, $p < .001$, $d = .96$ but less competent ($M = 4.06$, $SD = 1.35$ vs. $M = 5.06$, $SD = 1.28$), $t(86)=4.14$, $p < .001$, $d = .76$ (see Figure 3).

Among the participants who chose the willing Decider for themselves, they preferred to partner with the Chooser who also chose willing Deciders (70% to 30%), $\chi^2(1) = 4.80$, $p = .03$, $w = .40$. These participants also rated Choosers who chose willing Deciders as more moral ($M = 4.64$, $SD = .97$ vs. $M = 3.68$, $SD = 1.09$), $t(29)=2.71$, $p = .01$, $d = .93$, but not any less competent ($M = 4.35$, $SD = 1.35$ vs. $M = 4.82$, $SD = 1.40$), $t(29)=1.11$, $p = .28$, $d = .35$.

The participants who chose the able Decider for themselves also preferred to partner with Choosers who instead chose the willing Decider (67% to 33%), $\chi^2(1) = 6.33$, $p = .01$, $w = .33$. Those who chose able Deciders for themselves also evaluated Choosers who chose the willing Decider as being more moral ($M = 4.80$, $SD = 1.02$ vs. $M = 3.86$, $SD = .90$), $t(56)=4.95$, $p < .001$, $d = .98$, but less competent ($M = 3.90$, $SD = 1.33$ vs. $M = 5.18$, $SD = 1.20$), $t(56)=4.41$, $p < .001$, $d = 1.01$.

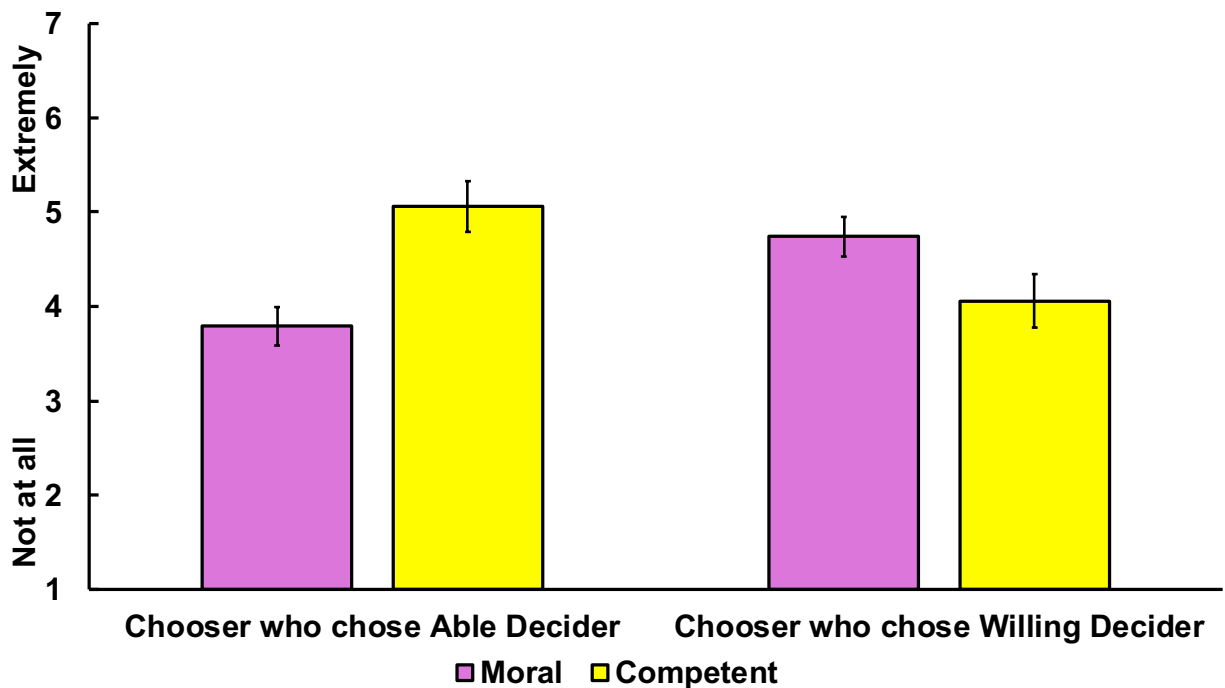


Figure 3. Inferences about character traits of those who chose either the able or willing dictator. Error bars represent 95% confidence intervals.

Discussion

Study 1 provides the first evidence, to our knowledge, of a signaling effect of partner choice decisions: Those who choose to partner with a willing partner over an able, selfish partner are in turn more likely to be selected as interaction partners. Furthermore, choosing a willing partner can signal superior moral character traits. This result is not merely due to a homophily, whereby people value those who make similar decisions as theirs. To the contrary, we find that the majority of people choose to partner with an able Decider but prefer others who choose to partner with a willing Decider. And, this preference for those who choose to partner with a willing Decider holds among individuals who themselves chose to partner with an able Decider.

This is not to say that choosing to partner with a willing Decider has only positive signaling value. We find that, while those who chose willing over able partners are rated as more moral they are also rated as less competent, which aligns with the fact that choosing the able partner is the utility maximizing choice. This pattern of results were moderated however by participants' own partner choice: those who chose the able partner viewed others who also chose the able partner as being more competent, but those who chose the willing partner did not see a preference for the able partner as a signal of competence. Importantly, despite this being a one-shot anonymous interaction, we posit that partner choice is adapted to contexts characterized by repeated and non-anonymous interactions.

Study 2: Signaling Benefits of Choosing Willing Partners (Online)

In Study 1, we find that those who choose to partner with willing Deciders over able Deciders are themselves more likely to be picked for cooperative interactions. While this study has the advantage of being conducted in-lab, it has the disadvantage of being hypothetical, and so actual money for participants was not at stake. In Study 2, we address this concern by examining the second-order partner choice selection effect with an incentivised online experiment without deception, in which participants are asked to make real partner choice decisions with real money at stake.

Methods

A total of 199 participants took part in this study. First, 100 workers (59% Male; Mean age = 36.20, $SD = 10.60$) from Amazon Mechanical Turk were recruited to play the role of one of the Deciders in this study. These Deciders were asked to choose between an able or a willing Decider for themselves. Next, they were asked out of \$1.00 how much they would share if they were the Decider. Then, half were endowed with \$2.50 and asked whether they want to share 50 cents or 0 cents, and the other half were endowed with \$0.50 and asked whether they want to share 25 cents or 0 cents. It should be noted that this dichotomization of the choice for Deciders was not revealed to the 99 workers described next; these 99 participants in step two were simply told how much the Decider chose to share.

After this process was complete, a total of 99 workers (59% Male; Mean age = 36.20, $SD = 11.13$) from Amazon Mechanical Turk were recruited to participate. These participants were informed that they could earn bonus money depending upon their decision in the experiment. After reading about the two Deciders (One Decider [able] who had 250 cents and chose to transfer 50 cents in a previous interaction, and another Decider [willing] who had 50 cents and chose to transfer 25 cents in a previous interaction), these 99 participants were asked to choose

which Decider they would like to have as their Decider in a DG. Next, these 99 participants were told of two other participants (two Choosers) who were given the same choice they were just given: One Chooser chose the Decider who had 250 cents and chose to share 50 cents in a previous interaction, and the other Chooser chose the Decider who had 50 cents and chose to share 25 cents in a previous interaction. Then, these 99 participants were asked to choose which of these two Choosers they would like to have as their Decider in a new DG (with the participant as the Recipient). The 99 participants received bonus money according to the decisions made by the partner they selected for the two DGs they participated in.

Results: Test of Hypothesis 1

Our results replicate the results from Study 1. Participants were more likely to choose to partner with an able Decider (69%) over a willing Decider (31%) for a DG, $\chi^2(1) = 13.83, p < .001, w = .37$. Despite this, they were more likely to choose to partner with someone who chose a willing Decider (72%) over an able Decider (28%), $\chi^2(1) = 18.68, p < .001, w = .43$.

Discussion

In Study 2, we replicated the second-order partner choice selection effect with an online sample of participants playing a DG with real partners and with real money at stake. Taken together, Studies 1 and 2 provide initial evidence of the potential functional benefits of choosing to partner with those who are willing over those who are able, even when this leads to an immediate material loss. Although the immediate material payoff may be superior when partnering with a wealthy partner, the reputational and cooperative benefits appear to be superior when partnering with a willing partner.

Study 3: Judgment of Choices & Honest Signal of Generosity in an Economic Game

In Study 3, we examine whether those who choose willing over able partners actually behave more generously in the DG. Previous research on third-party punishing has shown those who punish not only appear more moral (Barclay, 2006; Raihani & Bshary, 2015) but actually are more moral (Jordan, Hoffman, Bloom, & Rand, 2016). We draw a parallel between this research and ours by examining whether choosing willing over able partners is an honest signal of generosity.

Also, in Studies 1 and 2, we take a person-centered approach to moral judgment (Uhlmann, Pizarro, & Diermeier, 2015), investigating the perceptions of those who choose to pair with willing versus able Deciders. In Study 3, we extend these results by taking an act-based perspective. In particular, we evaluate what people think of the action of choosing a willing partner versus an able partner. Previous research has demonstrated that judgments of actors do not always align with judgments of actions (Uhlmann, Pizarro, & Diermeier, 2015).

Methods

A total of 198 workers from Amazon Mechanical Turk were recruited to participate. A total of 20 participants (10%) were excluded based on preregistered exclusion criteria. This left data from a total of 178 participants (48% Male; Mean age = 38.02, $SD = 11.08$) to be analysed.

After reading about the two Deciders, participants were randomly presented with either Chooser 1 and Chooser 2. Next, participants were asked to evaluate on a 7-point scale (1 = “not at all” to 7 = “extremely”) how praiseworthy, blameworthy, and morally correct the Chooser’s choice was. These three items were then averaged (blameworthiness was reverse coded) to create an index of participants’ evaluations of the choice. We also asked participants to evaluate on a 7-point scale (1 = “not at all” to 7 = “extremely”) how much the chooser cares about fairness. This

provided a comparison measure that focused instead on evaluations on the chooser rather than the choice.

Then, participants were asked to play the role of the Decider, and they could choose to transfer 0 – 100 cents to the participant they just evaluated. Participants received the money they chose to not transfer, but there were no other participants who received the money they did choose to transfer; thus, deception was used. Lastly, participants were asked to choose the same able Decider or willing Decider to be their Decider in a new DG. Before conducting this study, methods, hypotheses, and analysis plans were preregistered and can be accessed at:

<http://aspredicted.org/blind.php?x=36ub8h>

Results: Test of Hypothesis 3

Crucial to our hypothesis, across all DG transfers in this study, those who chose the willing partner ($n = 65$) shared more than those who chose the able partner ($n = 114$), ($M = 43.46$, $SD = 26.64$ vs. $M = 32.72$, $SD = 26.17$), $t(177) = 2.62$, $p = .01$, $d = .41$. Thus, it appears that those who choose willing partners are both perceived as more moral by others and in fact exhibit greater generosity in the DG (see Figure 4 for a graphical depiction).

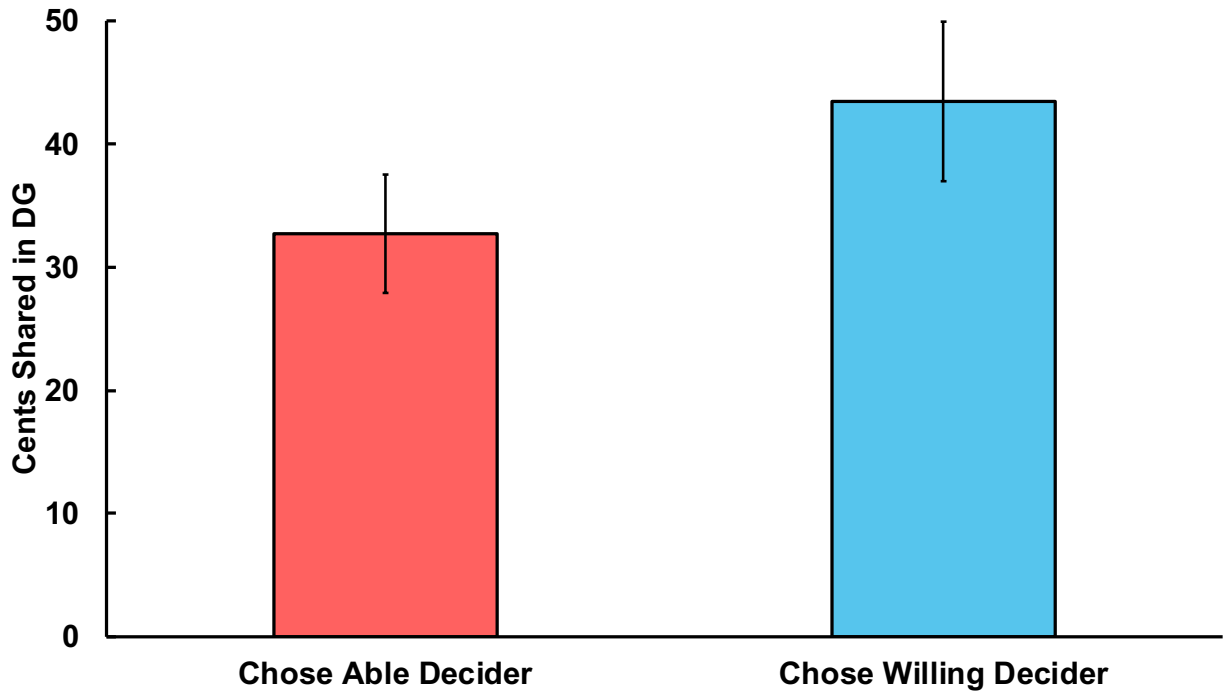


Figure 4. Number of cents shared in Dictator Game by those who previously chose willing versus able Dictators. Error bars represent 95% confidence intervals.

Participants on the whole did not view the act of choosing the willing partner as more praiseworthy than choosing the able partner ($M = 4.62$, $SD = 1.27$ vs. $M = 4.49$, $SD = 1.27$), $t(177) = .70$, $p = .49$, $d = .10$, nor did the person who chose the willing partner receive more money in the DG relative to the person who chose the able partner ($M = 35.38$, $SD = 26.37$ vs. $M = 37.86$, $SD = 27.25$), $t(177) = .62$, $p = .54$, $d = .09$. Replicating our pattern of results for character ratings from Study 1, participants did view those who chose the willing partner as caring more about fairness ($M = 5.02$, $SD = 1.71$ vs. $M = 3.63$, $SD = 1.49$), $t(177) = 5.80$, $p < .001$, $d = .87$. Even after making such judgments, most participants chose the able Decider for themselves (64% vs. 36%), $\chi^2(1) = 13.41$, $p < .001$, $w = .32$.

Among the 114 participants who chose the able partner for themselves, they also reported that those who chose the able partner care less about fairness ($M = 3.82$, $SD = 1.32$ vs. $M = 5.09$,

$SD = 1.64$), $t(112) = 4.58, p < .001, d = .85$. These participants also shared marginally more money with the person who also chose the able partner relative to the person who chose the willing partner ($M = 5.02, SD = 1.71$ vs. $M = 3.63, SD = 1.49$), $t(112) = 1.72, p = .09, d = .46$. These participants did not view choosing the willing partner to be any more praiseworthy relative to choosing the able partner ($M = 4.48, SD = 1.21$ vs. $M = 4.78, SD = 1.10$), $t(112) = 1.35, p = .18, d = .26$.

Among the 65 participants who chose the willing partner for themselves, they also reported that those who chose the willing partner care more about fairness ($M = 3.87, SD = 1.39$ vs. $M = 4.81, SD = 1.36$), $t(63) = 3.75, p < .001, d = 1.17$. These participants did not share more money with those who also chose the willing partner over the able partner ($M = 45.89, SD = 24.68$ vs. $M = 40.44, SD = 29.04$), $t(63) = .82, p = .42, d = .20$. These participants did view choosing the willing partner to be more praiseworthy relative to choosing the able partner ($M = 4.81, SD = 1.36$ vs. $M = 3.87, SD = 1.39$), $t(63) = 2.75, p = .008, d = .68$

We also found an interaction between participants' personal choice and how they evaluate the actions of others. Those who chose willing partners viewed choosing willing partners as being more praiseworthy, while those who chose able partners for themselves did not report a difference in how they viewed the act of choosing a willing versus able partner, $F(1, 195) = 11.86, p = .001, \eta_p^2 = .06$.

Discussion

In Study 3, we find that those who chose willing over able partners were more generous in the DG, suggesting that their partner choices are an honest signal of generosity. This finding is the first evidence, to our knowledge, of partner choice decisions serving as honest signals of moral character traits.

We also find that judgments about the praiseworthiness of partner choice decisions largely depend on individuals' own partner preferences. This pattern stands in contrast to the results of Studies 1 and 2, in which all participants, irrespective of personal partner choice, preferred those who chose willing partners. We found that those who chose willing partners viewed choosing a willing partner as being worthier of praise, but those who chose able partners did not report a difference in how they viewed the act of choosing a willing versus able partner.

Thus, it appears that judgments about the actor (in Studies 1 and 2) are robust to personal partner choice preferences, whereas judgments about the action (in Study 3) are influenced to some extent by personal partner choice preferences. This pattern may suggest an act-person dissociation in judgments about the partner choice decisions of others (Uhlmann, Pizarro, & Diermeier, 2015). One potential explanation for the dissociation in this context is that judgments of praise require more than viewing someone as a moral person – they require that the act is deemed of certain importance. Perhaps the act of choosing to partner with willing others, while reflecting moral character, is not deemed worthy of recognition.

One constant across all participants and all studies is that participants view those who choose willing partners as caring more about fairness. Even after making such judgments, the majority of participants chose to partner with an able partner over a willing partner, consistent with the results in Studies 1 and 2. Interestingly, those who chose willing partners did not receive larger transfers in the DG. Thus, it appears that, although choosing willing partners leads to reputational and cooperative benefits, it may not lead to immediate material benefits. This finding aligns with some research on third-party punishment, which has shown that those who punish are seen as more moral and are trusted with money more often (Barclay, 2006; Nelissen,

2008; Horita, 2010), they are not always rewarded more or given more money in the DG (e.g., Horita, 2010; but see Raihani & Bshary, 2015; see discussion in Barclay & Kiyonari, 2014).

Study 4: Full Factorial Design

Thus far, our approach has been to examine willingness and ability in opposition, asking whether choosers prefer partners who value willingness over ability. However, this approach does not allow us to examine the independent contribution of each factor. That is, what is driving participants' decisions could be a preference for those who value willingness rather than an aversion to those who value ability. Furthermore, in real life decisions between partners may not be binary but rather require deciding between multiple options simultaneously. To address these issues, Study 4 employs a fully crossed design. This allows us to examine whether our results reflect one main effect, two main effects, or an interaction effect. This approach also allows us to examine the possibility that our effect is simply a product of a chooser partnering with an unable partner. We seek to establish that the chosen partner has to exhibit willingness in order for the chooser to receive reputational benefits. We also examine whether the specific reputational benefits observed so far for those valuing ability over willingness, namely, being seen as more competent, disappear when the option of choosing an able *and* willing partner is introduced into the choice set, rendering the able but *not* willing partner undesirable.

Methods

A total of 202 workers from Amazon Mechanical Turk were recruited to participate. A total of 95 participants (47%) were excluded based on preregistered exclusion criteria. This left data from a total of 107 participants (64% Male; Mean age = 34.99, $SD = 11.40$) to be analysed.

Our study consisted of 2(Ability: high versus low) x 2(Willingness: high versus low) within-subjects design. First, participants were presented with four Deciders: one who is high on both ability and willingness, one who is high on ability but low on willingness, one who is high on willingness but low on ability, and one who is low on both ability and willingness. Next participants were presented with another supposed MTurk worker who chose one of the four Deciders; participants then evaluated that worker. This pattern was repeated until each participant evaluated four workers who each choose a different decider. The order of presentation was randomized.

Participants evaluated each of the four workers on ten items using a 7-point scale (1 = “not at all” to 7 = “extremely”). Staying consistent with our previous three studies, we created three indices: one index to capture the dimension of communion/morality (moral, trustworthy, fair, emotional, and warm), one index to capture the dimension of praiseworthiness of the choice (praiseworthiness, blameworthiness (reverse-coded), and morally correct), and one index to capture the dimension of agency/competence (competence, logicity). It should be noted that we did not specify whether the other worker was real or not; thus, responses in this study should be treated as hypothetical.

Last, participants were asked to choose which out of the four Deciders they would like to have as their Decider in a new DG. Before conducting this study, methods, hypotheses, and analysis plans were preregistered and can be accessed at:

<https://aspredicted.org/blind.php?x=pa72fr>

Results: Test of Hypothesis 1

We observed a main effect (see Table 1 for full statistical details) for willingness on our index of perceived moral character $F(1, 106) = 79.00, p < .001, \eta_p^2 = .43$. Importantly we

replicate within this larger choice set of partners our primary effect of interest: Choosing willing but less able partners serves as a stronger signal moral character relative to choosing able but less willing partners, $p < .001$.

We also observed an interaction effect on our index of perceived competence $F(1, 106) = 18.02, p < .001, \eta_p^2 = .15$. Although choosers were seen as more competent for valuing both willingness and ability in their partner, choosers were seen as especially competent when their partner was both willing and able. We also observed an interaction effect on our index of perceived praiseworthiness $F(1, 106) = 4.33, p = .04, \eta_p^2 = .04$. Similar to the pattern for perceived competence, choosers were seen as more praiseworthy for valuing both willingness and ability in their partner but choosers were seen as especially praiseworthy when their partner was both willing and able.

Finally, the vast majority of participants (87.9%) chose the partner who was both willing and able, followed by the partner who was able but less willing (7.5%), followed by the partner who was willing but less able (4.7%). None of the participants included in the analysis chose the partner who was neither able nor willing.

Table 1. Main effects and interaction effects from full factorial design examining the reputation effect of valuing both ability and willingness during partner choice decisions in Study 4.

Trait	Chose Low Able/Low Willing	Chose Low Able/High Willing	Chose High Able/Low Willing	Chose High Able/High Willing	Ability $p ; \eta p^2$	Willingness $p ; \eta p^2$	Interaction $p ; \eta p^2$
Moral	$M = 3.76$ $SD = 1.14$	$M = 5.20$ $SD = 1.02$	$M = 3.83$ $SD = 1.21$	$M = 5.32$ $SD = 1.06$	$p = .12$ $\eta p^2 = .02$	$p < .001$ $\eta p^2 = .43$	$p = .58$ $\eta p^2 = .003$
Competent	$M = 3.34$ $SD = 1.51$	$M = 4.77$ $SD = 1.43$	$M = 3.64$ $SD = 1.60$	$M = 5.80$ $SD = 1.13$	$p < .001$ $\eta p^2 = .29$	$p < .001$ $\eta p^2 = .48$	$p < .001$ $\eta p^2 = .15$
Praiseworthy	$M = 3.64$ $SD = 1.32$	$M = 5.14$ $SD = 1.18$	$M = 3.81$ $SD = 1.32$	$M = 5.57$ $SD = 1.03$	$p < .001$ $\eta p^2 = .14$	$p < .001$ $\eta p^2 = .45$	$p = .04$ $\eta p^2 = .04$

Discussion

First, our results replicate our focal effect of interest that those who choose willing but less able partners are seen as more moral relative to those who choose able but less willing partners. Our results also demonstrate that there are moral reputation benefits to be gained for valuing both willingness *and* ability during partner choice decisions, but valuing both traits together in one's partner provides the greatest reputational gain.

Our results also reveal how reputational effects can vary depending on the choice set of potential partners. Specifically, our previous three studies relied on a choice set of partners for a DG consisting of two options. There we found that those who value ability are seen as *more* competent. We find here in Study 4 that, when the option of choosing a partner who is both able *and* willing is added to the choice set, this option dominates the able but not willing option; as a result, those who chose the able but not willing partner are seen as *less* competent compared to those who chose the willing but not able partner. Furthermore, it appears that within this larger choice set of partners, people's partner choice decisions can gain them praise from observers.

Finally, given the low ratings for those who partner with the unable and unwilling partner, people do not appear to receive a reputational boost for simply pairing with those who are unable. In other words, the reputational benefits observed in the previous studies are not due to the chooser simply appearing charitable toward the partner who has less. Instead, the partner has to exhibit a willingness to cooperate in order for the chooser to receive reputational benefits.

Study 5: Meta-Awareness of Partner Choice Signals

In Study 5, we explore how people who choose willing versus able partners evaluate their own partner choice decisions and how these evaluations align with the actual judgments by evaluators. Such evidence can contribute to our costly signalling framework: while awareness is

not necessary to support a signalling argument, it is sufficient (or nearly so). Our previous studies have demonstrated functional design in the psychology of receivers, and here we examine whether senders of such signals are aware of the signal they are sending.

Specifically, we examine:

- a) choosers' self-evaluation of their partner choice
- b) choosers' expectations for how evaluators will judge them based on their partner choice
- c) alignment between choosers' self-evaluations and their expectations of evaluator judgments
- d) alignment between choosers' self-evaluations and actual evaluator judgments
- e) alignment between choosers' expectations of evaluator judgments and actual evaluator judgments

Drawing on previous research showing that those who are more cooperative rely more on emotion in their decision-making (Levine et al., 2018; Rand, Greene, & Nowak, 2012), we predict that people who choose willing partners may report relying more on emotion rather than reason. We follow a similar method as Levine et al., (2018) by relying on self-report to probe how subjects arrived at their decisions. This method of course comes with the limitation that people may never be fully aware of how they arrived at their decisions (Nisbett & Wilson, 1977). We follow previous work in this area by examining how people *believe* they arrived at a particular decision.

Methods

A total of 601 workers from Amazon Mechanical Turk were recruited to participate. A total of 80 participants (13.3%) were excluded based on preregistered exclusion criteria. This left data from a total of 521 participants (49% Male; Mean age = 38.81, $SD = 12.42$) to be analysed.

Participants were assigned to one of six conditions in this study. In one condition, participants were asked to choose between an able or a willing Decider while being told that their decision would be kept private from other workers who could choose to partner with them. In a second condition, participants were asked to choose between an able or a willing Decider while being told that their decision would be made public to other workers who could choose to partner with them. In both of these conditions, participants were asked, after making their partner choice to 1) evaluate their own decision and 2) predict how others would evaluate them if they were to see their decision. The order in which they answered these two sets of questions was randomized. In the four other conditions, participants were assigned to evaluate another worker who chose either a willing or an able partner, and made their decision in public or private. Across all six conditions, participants evaluated either themselves or another worker on the following items on a 7-point scale (1 = “not at all” to 7 = “extremely”): how much the decision was based on feelings and emotions, perceived personal warmth, and how much they/the other worker cares about fairness (Morality Index); how much the decision was based on logical reasoning and perceived personal competence (Competence Index); how praiseworthy was the choice, how blameworthy was the choice (reverse-coded), and how morally correct was the choice (Praiseworthy Index). Before conducting this study, methods, hypotheses, and analysis plans were preregistered and can be accessed at: <http://aspredicted.org/blind.php?x=g8dq76>

Results: Test of Hypothesis 2a

Participants preferred the able decider in the public condition (70% vs. 30%), $\chi^2(1) = 13.44, p < .001, w = .40$, as well as in the private condition (72% vs. 28%), $\chi^2(1) = 16.11, p < .001, w = .44$.

Choosers' self-evaluation of their partner choice:

Compared to people who chose the able decider, people who chose the willing decider reported that they were more moral ($M = 5.29, SD = 1.08$ vs. $M = 4.45, SD = 1.07$), $t(169) = 4.65, p < .001, d = .78$ and reported their choice as being more praiseworthy ($M = 5.37, SD = 1.03$ vs. $M = 4.71, SD = 1.05$), $t(169) = 3.79, p < .001, d = .63$. There was no difference on perceived self-competence ($M = 5.84, SD = 1.03$ vs. $M = 5.88, SD = .92$), $t(169) = .23, p = .82, d = .04$. These results did not vary depending on whether the decision was made in public or private (lowest interaction value, $p = .42$).

Choosers' expectations for how evaluators will judge them based on their partner choice:

Compared to people who chose the able decider, people who chose the willing decider expected others to see them as more moral ($M = 5.15, SD = 1.03$ vs. $M = 3.86, SD = 1.17$), $t(169) = 6.81, p < .001, d = 1.18$ and as being more praiseworthy ($M = 5.40, SD = 1.12$ vs. $M = 4.42, SD = 1.07$), $t(169) = 5.39, p < .001, d = .99$. There was no difference on expected perceived competence ($M = 5.47, SD = 1.07$ vs. $M = 5.38, SD = 1.08$), $t(169) = .52, p = .61, d = .08$. These results did not vary depending on whether the decision was made in public or private (lowest interaction value, $p = .33$).

Alignment between choosers' self-evaluations and their expectations of evaluator judgments:

Among participants who chose the able partner, their evaluations of their own decision and predictions for how others would evaluate them differed (see Supplementary Table 2a). These participants expected to be seen as less moral, competent, and praiseworthy than they

believed themselves to be. Among participants who chose the willing partner, their evaluations of their own decision and predictions for how others would evaluate them only differ on our index measure of competence (see Supplementary Table 2b). These participants expected to be seen as less competent they believed themselves to be.

Table 2a. Personal versus predicted evaluation among those who chose an able Decider in Study 5.

Trait	Personal Evaluation	Predicted Evaluation	<i>t</i>	<i>p</i>	<i>d</i>
Moral	<i>M</i> = 4.45 <i>SD</i> = 1.07	<i>M</i> = 3.86 <i>SD</i> = 1.17	6.38	< .001	1.02
Competent	<i>M</i> = 5.88 <i>SD</i> = .92	<i>M</i> = 5.38 <i>SD</i> = 1.08	5.89	< .001	.93
Praiseworthy	<i>M</i> = 4.71 <i>SD</i> = 1.05	<i>M</i> = 4.42 <i>SD</i> = 1.07	4.25	< .001	.75

Table 2b. Personal versus predicted evaluation among those who chose a willing Decider in Study 5.

Trait	Personal Evaluation	Predicted Evaluation	<i>t</i>	<i>p</i>	<i>d</i>
Moral	<i>M</i> = 5.29 <i>SD</i> = 1.08	<i>M</i> = 5.15 <i>SD</i> = 1.03	1.06	= .29	.89
Competent	<i>M</i> = 5.84 <i>SD</i> = 1.03	<i>M</i> = 5.47 <i>SD</i> = 1.07	2.85	= .006	.92
Praiseworthy	<i>M</i> = 5.37 <i>SD</i> = 1.03	<i>M</i> = 5.40 <i>SD</i> = 1.12	.21	= .84	.91

Alignment between choosers' self-evaluations and actual evaluator judgments:

There were no significant interactions between people's own evaluations of their partner choice decision and other people's evaluation of their partner choice decisions on our measures of morality, competence, and praiseworthiness (lowest interaction value, $p = .14$; see Table 3a for full statistical details).

Alignment between choosers' expectations of evaluator judgments and actual evaluator judgments:

There were marginally significant interactions between people's expectations for how they would be evaluated by others and how other people actually evaluated them on our index measures of competence and praiseworthiness. Participants who chose the able partner made accurate predictions as to how competent they would seem to others, but participants who chose the willing partner predicted that they would be seen as more competent than observers actually perceived them to be, $F(1, 517) = 3.84, p = .05, \eta_p^2 = .007$. Similarly, participants who chose the able partner made accurate predictions as to how praiseworthy they would seem to others, but participants who chose the willing partner predicted that they would be seen as marginally more praiseworthy than observers actually perceived them to be, $F(1, 517) = 2.98, p = .09, \eta_p^2 = .006$ (see Table 3b for full statistical details).

Table 3a. Interaction between participant's own evaluation and others' evaluation of their partner choice decision in Study 5.

Trait	Self- evaluation: chose Willing	Self- evaluation: chose Able	Other evaluation: chose Willing	Other evaluation: chose Able	<i>F</i>	<i>p</i>	η_p^2
Moral	<i>M</i> = 5.29 <i>SD</i> = 1.08	<i>M</i> = 4.45 <i>SD</i> = 1.07	<i>M</i> = 4.67 <i>SD</i> = 1.22	<i>M</i> = 3.65 <i>SD</i> = 1.16	.68	= .41	.001
Competent	<i>M</i> = 5.84 <i>SD</i> = 1.03	<i>M</i> = 5.88 <i>SD</i> = .92	<i>M</i> = 4.70 <i>SD</i> = 1.46	<i>M</i> = 5.11 <i>SD</i> = 1.30	2.23	= .14	.004
Praiseworthy	<i>M</i> = 5.37 <i>SD</i> = 1.03	<i>M</i> = 4.71 <i>SD</i> = 1.05	<i>M</i> = 4.80 <i>SD</i> = 1.18	<i>M</i> = 4.21 <i>SD</i> = 1.16	.12	= .73	.000

Table 3b. Interaction between participant's own prediction and others' evaluation of their partner choice decision in Study 5.

Trait	Self- prediction : chose Willing	Self- prediction : chose Able	Other evaluation : chose Willing	Other evaluation : chose Able	<i>F</i>	<i>p</i>	η_p^2
Moral	<i>M</i> = 5.15 <i>SD</i> = 1.03	<i>M</i> = 3.86 <i>SD</i> = 1.17	<i>M</i> = 4.67 <i>SD</i> = 1.22	<i>M</i> = 3.65 <i>SD</i> = 1.16	1.33	= .25	.003
Competent	<i>M</i> = 5.47 <i>SD</i> = 1.07	<i>M</i> = 5.38 <i>SD</i> = 1.08	<i>M</i> = 4.70 <i>SD</i> = 1.46	<i>M</i> = 5.11 <i>SD</i> = 1.30	3.84	= .05	.007
Praiseworthy	<i>M</i> = 5.40 <i>SD</i> = 1.12	<i>M</i> = 4.42 <i>SD</i> = 1.07	<i>M</i> = 4.80 <i>SD</i> = 1.18	<i>M</i> = 4.21 <i>SD</i> = 1.16	2.98	= .09	.006

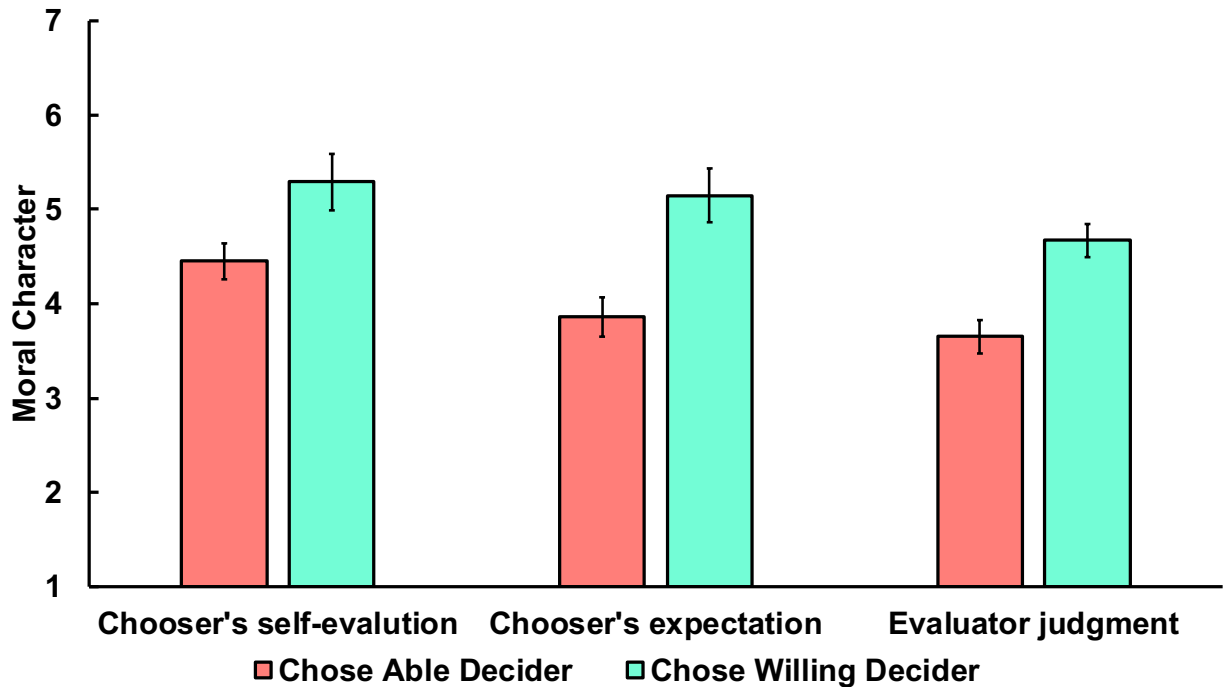


Figure 5. Chooser's self-evaluation for how moral they are, expectation for how moral they will be seen to be, and how moral they are judged to be by others. Error bars represent 95% confidence intervals.

Discussion

Our results reveal important differences between people who choose willing versus able partners. Notably, we find evidence that the people who choose willing partners expect others to see them in a more positive light. This serves as evidence that people not only gain reputational benefits for choosing willing partners but are able to accurately predict such reputational benefits. Furthermore, not only are people who choose willing partners more generous in the DG, as shown in Study 3, but as seen here in Study 5 such individuals also report believing themselves to be more moral, such as caring more about fairness. People who choose willing partners also feel that they are worthier of praise. Importantly, this seems to not lead to a

licensing effect but rather a consistency effect (Blanken et al., 2015; Mullen & Monin, 2016), given their subsequent generosity in the DG.

Our results also reveal that people by and large have an accurate impression of the signal they are sending via their partner choice. This is what would be expected given our conceptual model. With that said, people do make some mispredictions about how they are seen by others. Those who chose willing partners expected others to see them as more competent and praiseworthy than people judge them to be. This serves as the first examination of the accuracy of meta-judgments within the domain of partner choice.

We found a null effect of social visibility (although the able partner was chosen slightly, albeit non-significantly, more in private). Our confidence in this null effect is tempered by the fact our manipulation was rather weak and moreover we did not include a manipulation check to assess how many participants were aware of our manipulation. Furthermore, participants' evaluations of both their own and other people's choice of a partner were not influenced by social visibility. Thus, while this might suggest partner choice decisions are robust to cues of social visibility, further exploration across other contexts and manipulations is needed.

Study 6: Moderation Based on Reputational Incentives and Time Horizons & Honest Signal of Dark Triad Traits

We demonstrated in Study 5 that people are aware of the signal their partner choice decisions send, thus suggesting functional design in the psychology of the signaler. In Study 5 we build upon this evidence by examining whether people employ this understanding by shifting their partner choice decisions as a result of different reputational incentives present in their environment. In other words, we ask: is partner choice sensitive to different injunctive norms?

Given that our previous studies have shown that choosing willing partners signals warmth and morality and choosing able partners signals competence and logicity, we examine whether incentives to appear warm and moral increase the rate of choosing willing partners and, on the flip side, whether incentives to appear competent and competitive increase the rate of choosing able partners.

We further investigate our conceptual model by testing whether people's preference for ability versus willingness in prospective partners shifts depending on whether they are choosing a partner for a short-term versus long-term relationship. Finally, we examine the generalizability of our evidence of honest signaling by measuring whether those who choose willing over able partners score lower on the Dark Triad (Paulhus & Williams, 2002) of personality traits: Machiavellianism (Christie & Geis, 1970), narcissism, and psychopathy (Jones & Paulhus, 2014).

Methods

A total of 403 workers from Amazon Mechanical Turk were recruited to participate. A total of 99 participants (24.6%) were excluded based on preregistered exclusion criteria. This left data from a total of 304 participants (55% Male; Mean age = 38.67, $SD = 11.42$) to be analysed.

Our study consisted of a 2 (incentive to appear competitive or cooperative) x 2 (asked to choose partner in DG or business deal) between-subjects factorial design. Participants were randomly assigned to imagine being interviewed for a job they really want at either an investment bank or a non-profit organization. Participants were told that at the investment bank employers are looking to hire someone who is competitive, skilled, and ambitious, and at the non-profit organization employers are looking to hire someone who is compassionate, caring, and ethical. This draws upon a methodology previously employed to manipulate reputational

incentives (Rom & Conway, 2018). Participants were then told that, as part of the interview, the interviewer would like to evaluate their decision on a partner choice task. Participants were randomly assigned to choose between an able or a willing partner for either a Dictator Game or a business deal. The business deal vignette consisted of a prospective business partner who has more money (i.e. is more able) but previously shared only 20% of the earnings (i.e. is less willing) with a prior business partner versus a prospective business partner who has less money (i.e. is less able) but previously shared 50% of the earnings (i.e. is more willing) with a prior business partner. The ratio of money was equivalent to the ratio described in the DG in Studies 1-4. In the business deal conditions, participants were asked to decide between an able or willing partner for both a short-term and a long-term business partnership.

Our previous studies have showed that i) choosing a willing partner signals morality and warmth and choosing an able partner signals competence and logicity (Study 1) and ii) people are aware that they are sending such signals by choosing such partners (Study 5). Thus, we predict that when the incentives favor appearing competitive, skilled, and ambitious (i.e. the investment bank conditions) people will be more likely to choose the able partner in the DG and business partner vignette and when the incentives favor appearing compassionate, caring, and ethical (i.e. the non-profit organization conditions) people will be more likely to choose the willing partner in the DG and business partner vignette.

After choosing a partner, participants were then told that the interview was over, and they were asked to complete a modified measure of trait Machiavellianism (Christie & Geis, 1970), narcissism, and psychopathy (Jones & Paulhus, 2014). Before conducting this study, methods, hypotheses, and analysis plans were preregistered and can be accessed at:
<https://aspredicted.org/blind.php?x=9fy8z6>

*Results: Test of Hypothesis 2b**DG partner*

Participants who were assigned to the investment bank x DG condition (i.e. imagined they were being interviewed at an investment bank and were asked as part of the interview to choose a partner in a DG) chose the able dictator marginally more often than the willing dictator (able = 61% vs. willing = 39%) $\chi^2(1) = 3.86, p = .05$, but participants who were assigned to the non-profit x DG condition did not show a preference between the able versus willing dictator (able = 52% vs. willing = 48%) $\chi^2(1) = .13, p = .72$. The comparison between the two conditions was non-significant, $p = .28$.

Short-term business partner

Participants who were assigned to the investment bank x business partner condition (i.e. imagined they were being interviewed at an investment bank and were asked as part of the interview to choose a partner in the business partner vignette) did not show a preference between the willing versus able partner for a short-term partnership (willing = 51% vs. able = 49%) $\chi^2(1) = .06, p = .81$, but participants who were assigned to the non-profit x business partner condition chose the willing partner more often than the able partner for a short-term partnership (willing 84% vs. able = 16%) $\chi^2(1) = 35.56, p < .001$. The comparison between the two conditions was significant, $p < .001$ (see Figure 6 for a graphical depiction).

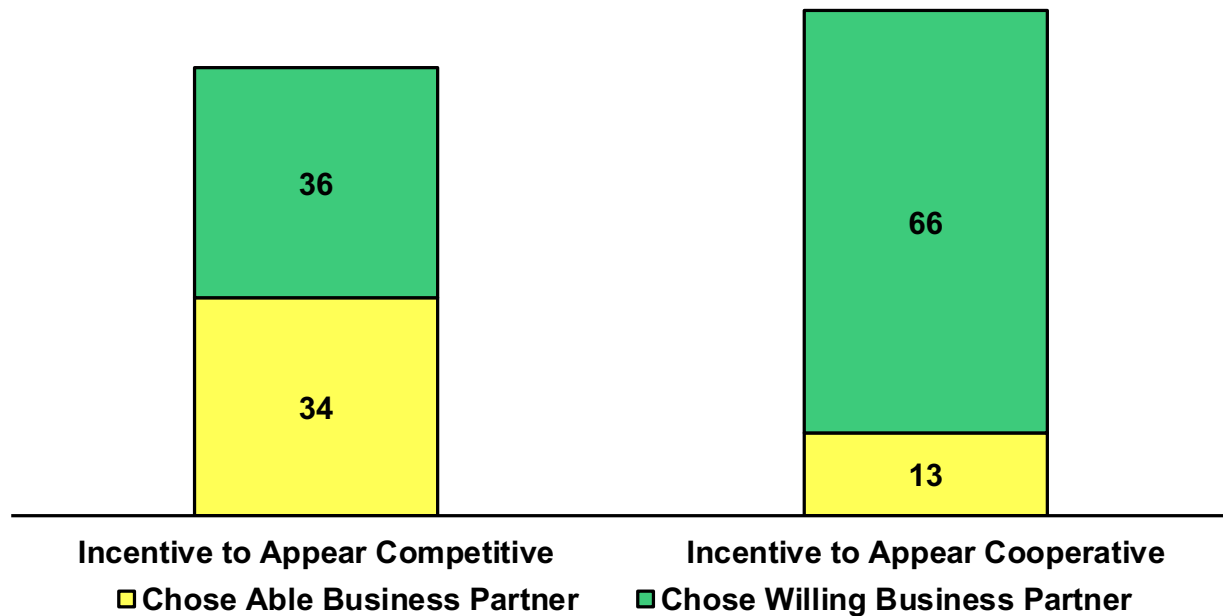


Figure 6: Reputational incentives moderating choice of partner.

Long-term business partner

Participants who were assigned to the investment bank x business partner condition chose the willing partner more often than the able partner for a long-term partnership (willing = 91% vs. able = 9%) $\chi^2(1) = 48.06, p < .001$, and participants who were assigned to the non-profit x business partner condition also chose the willing partner more often than the able partner for a long-term partnership (willing = 87% vs. able = 13%) $\chi^2(1) = 44.06, p < .001$. The comparison between the two conditions was non-significant, $p = .42$.

Time horizons: Test of Hypothesis 4

Across both the investment bank and non-profit conditions, when participants chose a partner for a long-term relationship they valued willingness more compared to when they were choosing a partner for a short-term relationship (long-term = 89% vs. short-term = 68%), $p < .001$. We also find an interaction effect such that willingness was valued more for long versus

short-term relationships in the investment bank condition (long-term = 91% vs short-term = 51%), $p < .001$, but in the non-profit condition the willing partner was valued similarly irrespective of time horizons (long-term = 87% vs short-term = 84%), $p = .42$. This suggests that strong incentives to signal moral goodness may minimize the influence of time horizons on partner choice (see Figure 7 for a graphical depiction).

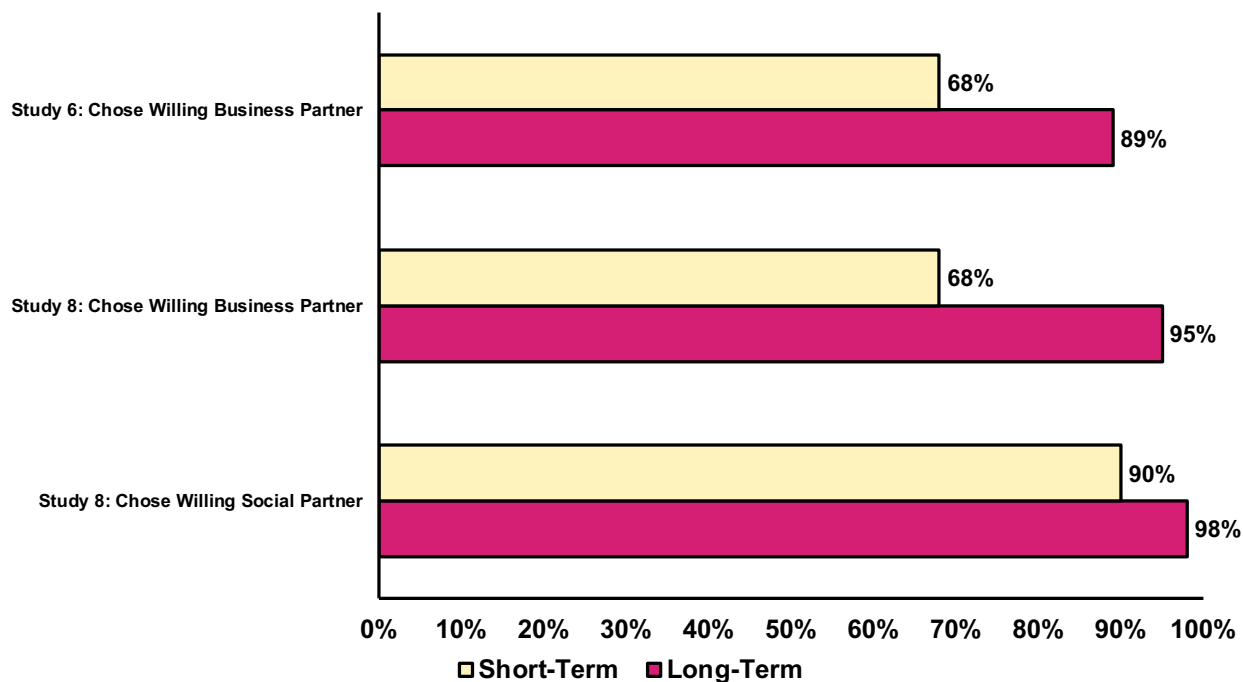


Figure 7: Time horizons moderating choice of partners across Studies 6 and 8.

Honest signal: Test of Hypothesis 3

Moral types were more likely to choose willing over able partners when choosing partners. In the non-profit condition, participants who chose willing partner scored lower on trait Machiavellianism than participants who chose the able partner (short-term partnerships: ($M = 3.11$, $SD = .74$ vs. $M = 3.48$, $SD = .68$), $t(77) = 1.70$, $p = .09$, $d = .52$; long-term partnerships: $M = 3.09$, $SD = .74$ vs. $M = 3.73$, $SD = .48$), $t(77) = 2.70$, $p = .009$, $d = 1.03$). A similar pattern was found in the investment bank condition when choosing long term partners: participants who

chose a willing partner for a long term relationship scored lower on Machiavellianism than participants who chose an able partner for a long-term relationship, but the effect was not significant in the short-term condition (short-term partnerships: $M = 3.32$, $SD = .67$ vs. $M = 3.49$, $SD = .76$), $t(68) = .98$, $p = .33$, $d = .24$; long-term partnerships: $M = 3.38$, $SD = .74$ vs. $M = 3.73$, $SD = .24$), $t(16.94) = 2.67$, $p = .02$, $d = .63$).

We also observed that participants in the non-profit x business partner condition who chose the able over willing partner for a long-term partnership scored higher on trait psychopathy ($M = 3.52$, $SD = .69$ vs. $M = 2.46$, $SD = .87$) $t(77) = 3.69$, $p < .001$, $d = 1.35$. No significant differences were observed in the other conditions with regards to trait psychopathy, nor were there any differences in any of the conditions with regards to trait narcissism (lowest p-value = .12).

Discussion

When the incentive was to appear competent, people showed no preference between the willing versus able business partner, but when the incentive was to appear moral people showed a strong preference for the willing partner. This suggests that people may shift their partner preference depending on immediate reputational incentives, using their partner choice to signal certain traits. It is also worth noting that in Study 8 (below) we ask participants to choose a business partner in this same business partner vignette while not manipulating reputational incentives. We find that the willing partner is chosen 68% of the time, which is 17% more than when they are incentivized to signal competence (51% choose willing) and 16% less than when they are incentivized to signal morality (84% choose willing). In the DG the preference for the able dictator disappeared when the incentive was to appear moral, but emerged when the incentive was to signal competence.

We note, however, that the comparison between conditions in the DG was directional but non-significant.

While reputational incentives appeared to have an effect on decisions about short-term partnerships, they did not affect long-term partnership decisions. Irrespective of the reputational incentives, people preferred the willing business partner for a long-term relationship. The fact that our manipulation of reputational incentives shifted choices for short-term but not long-term partnership may also quell any concerns that participant behavior in this study is simply due to demand effects. If demand effects were operating we would expect to see similar shifts regardless of whether the choice was for a short- or long-term partnership. Instead the results seem to suggest a genuine shift of preference based on reputational incentives when deciding on short-term partners. When it comes to choosing long-term partners, individual differences may dominate situational factors.

Such individual differences may include personal moral orientation toward others: we found across multiple conditions that those who chose the willing over able partner score lower on trait Machiavellianism. This aligns with our theory that those who are more moral are more likely to have relationships that persist into the long run (because they are more likely to act cooperatively with others). As a result, these individuals recoup the costs of forgoing the immediate benefits of partnering with able others. Lending further support to our conceptual model, we found that people who are focused on choosing a partner for a long-term relationship show a greater preference for willingness over ability in their partner.

Study 7: Meta-Awareness of Partner Choice Signals & Honest Signal of Dark Triad Traits

To provide further evidence of adaptive design in the psychology of the signaler, we additionally examine whether people have different reputational concerns and anticipate different reputational costs after choosing able versus willing partners. If partner choice is a signal and not simply a cue (Biernaskie, Perry, & Grafen, 2018), people should anticipate different signaling outcomes as a result of their partner choice. Relatedly, we also test whether people anticipate experiencing different emotions if others were to learn of their partner choice. We also examine whether certain people have different expectations of their partners, whether certain people exhibit different levels of hesitancy when choosing certain partners, and what people think of others who make similar partner choices. We investigate these questions across both the DG and a vignette describing two farmers. We chose this farming vignette because it entails a common real-world situation where a person must choose between a more able versus more willing partner for a cooperation task. Finally, we measure the Dark Triad (Paulhus & Williams, 2002) of personality traits: Machiavellianism (Christie & Geis, 1970), narcissism, and psychopathy (Jones & Paulhus, 2014).

Methods

A total of 651 workers from Amazon Mechanical Turk were recruited to participate. A total of 128 participants (19.7%) were excluded based on preregistered exclusion criteria. This left data from a total of 523 participants (54% Male; Mean age = 39.51, $SD = 12.66$) to be analysed. There were six conditions in this study. Half of the participants were randomly assigned to choose a partner for the DG. The other half of participants were randomly assigned to choose a partner for a farming partnership. In the farm vignette participants read about two farmers that they could choose as a partner on their new farm. One farmer is the top farmer in the community and consistently produces record yields and record profits, but refuses to sell any of

his produce at discounted prices to needy families. The other farmer is an average farmer in the community and produces average yields and average profits, but is always willing to sell a large portion of his produce at discounted prices to needy families.

Participants were then randomly assigned to one of three conditions: One third of the participants were informed that the majority (percentages varied randomly between 65%-85%) of previous participants chose the able partner, while the minority (percentages correspondingly varied between 35%-15%) of previous participants preferred the willing partner. One third of the participants were informed that the majority (percentages varied randomly between 65%-85%) of previous participants chose the willing partner, while the minority (percentages correspondingly varied between 35%-15%) of previous participants preferred the able partner. The final third of the participants were assigned to a baseline condition, in which they were not provided with any such information and were simply asked to choose between the willing and able partners. This was done to explore whether people's partner choice decisions are influenced by descriptive norms about partner choice within their environment.

After choosing their partner, participants were asked whether they would be concerned about their reputation if other people in the community were to learn of their choice, how their choice would affect their reputation in the community, and what others would think of them based on their choice. These three items averaged to create an index of anticipated reputational effect. Participants were also asked to what extent they would experience the emotions of pride (reverse-coded), guilt, and shame if others learned of their choice. These three items were averaged to create an index of anticipated negative emotions.

Next participants were asked about their expectations for their partnership and how hesitant they were when making their partner choice. And then participants were asked, if they

were to meet someone who made the same partner choice, how moral and trustworthy they would expect them to be. Finally, participants completed the Dark Triad measure. Before conducting this study, methods, hypotheses, and analysis plans were preregistered and can be accessed at: <https://aspredicted.org/blind.php?x=mt4je3>

Results:

DG Condition: Test of Hypothesis 2a

Compared to participants who chose the able Decider, the participants who chose the willing Decider in the DG anticipated that such a partner choice would have a more positive impact on their reputation ($M = 6.14, SD = .79$ vs. $M = 5.85, SD = .60$), $t(261) = 3.28, p = .001, d = .41$. Participants who chose the willing Decider also expected to feel less negative emotions if others were to learn of their partner choice ($M = 2.91, SD = 1.04$ vs. $M = 3.56, SD = 1.09$), $t(261) = 4.74, p < .001, d = .61$. Participants who chose the willing Decider, compared to those who chose the able Decider, expected others who made the same partner choice to be more moral ($M = 6.25, SD = 1.50$ vs. $M = 5.39, SD = 1.21$), $t(158.30) = 4.77, p < .001, d = .63$. Finally, participants who chose the willing Decider did not experience less hesitancy, although the pattern was in the predicted direction ($M = 2.49, SD = 1.83$ vs. $M = 2.84, SD = 1.92$), $t(261) = 1.42, p = .16, d = .19$.

DG Condition: Test of Hypothesis 3

Compared with participants who chose the willing Decider, participants who chose the able Decider in the DG scored higher on trait Machiavellianism ($M = 3.41, SD = .88$ vs. $M = 3.09, SD = .77$) $t(261) = 2.88, p = .004, d = .38$. No difference was observed with regards to trait psychopathy or narcissism (lowest p-value = .10).

Farm Condition: Test of Hypothesis 2a

Compared to participants who chose the able farmer, the participants who chose the willing farmer in the farm vignette anticipated that such a partner choice would have a more positive impact on their reputation ($M = 6.64, SD = 1.09$ vs. $M = 5.21, SD = .99$), $t(258) = 10.96, p < .001, d = 1.37$. Participants who chose the willing farmer also expected to feel less negative emotions if others were to learn of their partner choice ($M = 2.30, SD = 1.05$ vs. $M = 3.94, SD = 1.49$), $t(217.26) = 10.19, p < .001, d = 1.27$. Participants who chose the willing farmer, compared to those who chose the able farmer, expected others who made the same partner choice to be more moral ($M = 7.10, SD = 1.36$ vs. $M = 5.60, SD = 1.42$), $t(258) = 8.72, p < .001, d = 1.08$. Finally, participants who chose the willing farmer experienced less hesitancy when choosing their partner ($M = 2.19, SD = 1.54$ vs. $M = 3.64, SD = 2.21$), $t(214.34) = 6.08, p < .001, d = .76$.

Farm Condition: Test of Hypothesis 3

Compared with participants who chose the willing farmer, participants who chose the able farmer for the farming partnership scored higher on trait Machiavellianism ($M = 3.57, SD = .87$ vs. $M = 3.10, SD = .75$) $t(258) = 4.70, p < .001, d = .58$, narcissism ($M = 3.48, SD = 1.10$ vs. $M = 3.06, SD = .95$) $t(258) = 2.97, p = .003, d = .41$, and psychopathy ($M = 2.75, SD = 1.04$ vs. $M = 2.42, SD = .87$) $t(258) = 2.76, p = .006, d = .34$.

We also found, as predicted, that those who scored lower on trait Machiavellianism tended to have higher expectations of their farming partner to be cooperative, regardless of whether that partner was an able ($r = -.29, p = .001$) or willing ($r = -.26, p = .003$) farming partner.

Influence of Descriptive Norms

As an exploratory analysis, we examined what effect varying descriptive norms had on partner choice decisions, both in the context of the DG and the context of the farm vignette. Participants in the baseline condition in the DG showed a strong preference for the able Decider over the willing Decider (chose able = 67% vs. chose willing = 33%), $\chi^2(1) = 11.13, p = .001, w = .35$. When informed that the majority chose the able Decider, participants continued to prefer the able over willing Decider (chose able = 72% vs. chose willing = 28%), $\chi^2(1) = 16.79, p < .001, w = .44$. But when informed that the majority chose the willing Decider, the preference for the able Decider became non-significant (chose able = 54% vs. chose willing = 46%), $\chi^2(1) = .58, p = .45, w = .08$. The overall interaction between choice and condition reached significance, $p = .04$.

Participants in the baseline condition in the farm vignette showed a slight, albeit nonsignificant, preference for the willing farmer over the able farmer (chose willing = 56% vs. chose able = 44%), $\chi^2(1) = 1.42, p = .23, w = .13$. When informed that the majority chose the willing Decider, participants continued to show a slight, albeit nonsignificant, preference for the willing over able farmer (chose willing = 58% vs. chose able = 42%), $\chi^2(1) = 2.33, p = .13, w = .17$. But when informed that the majority chose the able farmer, the preference for the able farmer became greater than the preference for the willing farmer, albeit non-significantly (chose willing = 44% vs. chose able = 56%), $\chi^2(1) = 1.33, p = .25, w = .12$. The overall interaction between choice and condition was non-significant, $p = .11$.

Discussion

We replicate the honest signaling effect observed in Study 6, such that people who chose able partners score higher on measures of immoral personality traits. Importantly, we also find evidence that people anticipate that their reputation will be harmed by choosing an able partner

and will be enhanced by choosing a willing partner. This provides support for the idea of adaptive design in the psychology of the signaler, in that choosers correctly anticipate the signaling effect of their partner choice. Not only do people gain reputational benefits for choosing certain partners, as demonstrated across multiple studies, and also modulate their partner choice to gain such a reputation, as demonstrated in Study 6, but also, as we show in this study, people anticipate the reputational costs and benefits of choosing certain partners. Furthermore, people who choose able partners anticipate experiencing more negative emotions if others learn of their partner choice and also judge those who also choose able partners as being less moral. We also provide some evidence in this study of modulation of partner choice based upon descriptive norms. Such modulation could serve as further evidence of adaptive design for signaling via partner choice decisions (Bostyn & Roets, 2017), but further research is needed to verify whether that is in fact the case.

Study 8: Signaling Benefits of Choosing Willing Partners & Moderation Based on Time Horizons & Honest Signal of Dark Triad Traits

Having found that partner choice decisions garner reputational benefits within the context of a Dictator Game, a business partnership, and a farming partnership, we further explore the generalizability of this effect by examining whether such reputational benefits are observed when people are choosing a partner for a social event and when ability is operationalized not as having greater resources or skills but rather as having greater social status. We also test our theoretical model by again examining whether partner choice serves as an honest signal. Similar to Studies 6 and 7 we examine how participant partner choice relates to the Dark Triad of personality traits: Machiavellianism (Christie & Geis, 1970), narcissism, and psychopathy (Jones & Paulhus,

2014). And, we further test our model by again examining whether people's preference for ability versus willingness in prospective partners shifts depending on whether people are choosing a partner for a short-term versus long-term relationship.

Methods

A total of 403 workers from Amazon Mechanical Turk were recruited to participate. A total of 134 participants (33.3%) were excluded based on preregistered exclusion criteria. This left data from a total of 269 participants (52% Male; Mean age = 38.94, $SD = 12.00$) to be analysed.

Half of the participants were assigned to read the business partner choice vignette described in Study 6. To probe the generalizability of our effect, the other half of the participants were assigned to read a high school vignette. In the high school vignette, we operationalized ability versus willingness not as wealth versus generosity but as popularity versus kindness. This follows previous research defining ability as having the resources to benefit others and willingness as showing an inclination to benefit others (Kafashan, 2017). The high school vignette consisted of a classmate who is very popular (i.e. more able) but very arrogant (i.e. less willing) versus a classmate who is very kind (i.e. more willing) but unpopular (i.e. less able). The popular classmate is able to benefit the chooser more because, as we stipulate in the vignette, by pairing with the popular classmate the chooser is more likely to increase their own popularity at their high school. This is analogous to the business case in that by choosing to partner with the wealthy business partner, the chooser is more likely to increase their own wealth.

Half of the participants who read the business vignette read that the chooser chose the able partner while the other half read that the chooser chose the willing partner. Half of the participants who read the high school vignette read that the chooser chose the able partner while

the other half read that the chooser chose the willing partner. After reading about the chooser's decision, participants evaluated the chooser on how trustworthy and moral, how emotional and logical, and how warm and competent they seemed. We measured perceived warmth with four items (warm, good-natured, tolerant, and sincere) and we measured perceived competence with five items (competent, confident, independent, competitive, and intelligent). These items were previously validated in prior research (Fiske, Cuddy, & Glick, 2007). In alignment with our previous studies, we then averaged our measures of morality, trustworthiness, emotionality, and warmth into one index to indicate perceived morality. We also averaged our measures of logicity and competence into one index to indicate perceived competence.

Next, participants assigned to the business vignette were asked to choose which business partner they would choose for both a long-term friendship and a short-term business partnership and the participants assigned to the high school vignette were also asked to choose which classmate they would choose to invite to the social event and who they would choose for a long-term friendship.

Finally, participants completed a modified measure of trait Machiavellianism (Christie & Geis, 1970), narcissism, and psychopathy (Jones & Paulhus, 2014). Before conducting this study, methods, hypotheses, and analysis plans were preregistered and can be accessed at:

<http://aspredicted.org/blind.php?x=d2vg8j>

Results

Business partner condition: Test of Hypothesis 1

In the business partner condition, participants rated those who chose the willing business partner as more moral ($M = 5.40$, $SD = .92$ vs. $M = 3.93$, $SD = .87$), $t(127) = 9.29$, $p < .001$, $d =$

1.64 and more competent ($M = 5.57, SD = 1.02$ vs. $M = 4.83, SD = 1.35$), $t(127) = 3.50, p = .001, d = .62$.

Business partner condition: Test of Hypothesis 4

When deciding between the able and willing business partners for themselves, participants chose the willing business partner more often when deciding on a partner for a long-term relationship (95% chose the willing partner) versus short-term relationship (68% chose the willing partner), $p < .001$ (see Figure 7 for a graphical depiction).

Business partner condition: Test of Hypothesis 3

Participants who chose the able business partner for a short-term relationship scored higher than those who chose the willing business partner for a short-term relationship on trait Machiavellianism ($M = 3.64, SD = .76$ vs. $M = 3.31, SD = .80$), $t(81.36) = 2.23, p = .03, d = .42$. Participants who chose the able business partner for a long-term relationship did not show any difference compared to those who chose the willing business partner for a long-term relationship on trait Machiavellianism ($M = 3.24, SD = .97$ vs. $M = 3.42, SD = .79$), $t(5.33) = .46, p = .66, d = .21$.

Somewhat surprisingly, participants who chose the able business partner for a short-term relationship also scored *lower* than those who chose the willing business partner for a short-term relationship on trait narcissism ($M = 3.38, SD = 1.05$ vs. $M = 3.81, SD = .94$), $t(63.81) = 2.18, p = .03, d = .43$. No difference was observed for trait psychopathy in the short-term condition and no difference was observed for trait psychopathy or narcissism in the long-term condition (lowest p-value = .36).

Classmate condition: Test of Hypothesis 1

In the high school classmate condition, participants rated those who chose the willing classmate as more moral ($M = 6.24, SD = .83$ vs. $M = 3.80, SD = 1.04$), $t(138) = 15.22, p < .001, d = 2.59$ and more competent ($M = 5.49, SD = .91$ vs. $M = 4.02, SD = 1.21$), $t(138) = 8.07, p < .001, d = 1.37$.

Classmate condition: Test of Hypothesis 4

When deciding between the able and willing classmate for themselves, participants chose the willing classmate more often when deciding on a partner for a long-term relationship (98% chose the willing classmate) versus short-term relationship (90% chose the willing classmate), $p < .006$ (see Figure 7 for a graphical depiction).

Classmate condition: Test of Hypothesis 3

Participants who chose the able classmate for a short-term relationship scored higher than those who chose the willing classmate for a short-term relationship on trait Machiavellianism ($M = 4.01, SD = 1.03$ vs. $M = 3.16, SD = .70$), $t(14.39) = 3.05, p = .008, d = .97$. Participants who chose the able classmate for a long-term relationship also scored higher, albeit non-significantly, than those who chose the willing classmate for a long-term relationship on trait Machiavellianism ($M = 4.29, SD = .81$ vs. $M = 3.22, SD = .77$), $t(2.08) = 2.26, p = .15, d = 1.35$. See Figure 8 for a graphical depiction of such results for trait Machiavellianism across Studies 6, 7, 8, and 7.

Participants who chose the able classmate for a long-term relationship also scored higher than those who chose the willing classmate for a long-term relationship on trait narcissism ($M = 4.37, SD = .28$ vs. $M = 3.60, SD = 1.04$), $t(3.56) = 4.13, p = .02, d = 1.01$, and trait psychopathy ($M = 4.42, SD = .80$ vs. $M = 2.51, SD = 1.02$), $t(4.03) = 2.14, p = .05, d = 2.08$. No difference

was observed for trait narcissism or psychopathy when choosing a partner for a short-term relationship (lowest p-value = .23).

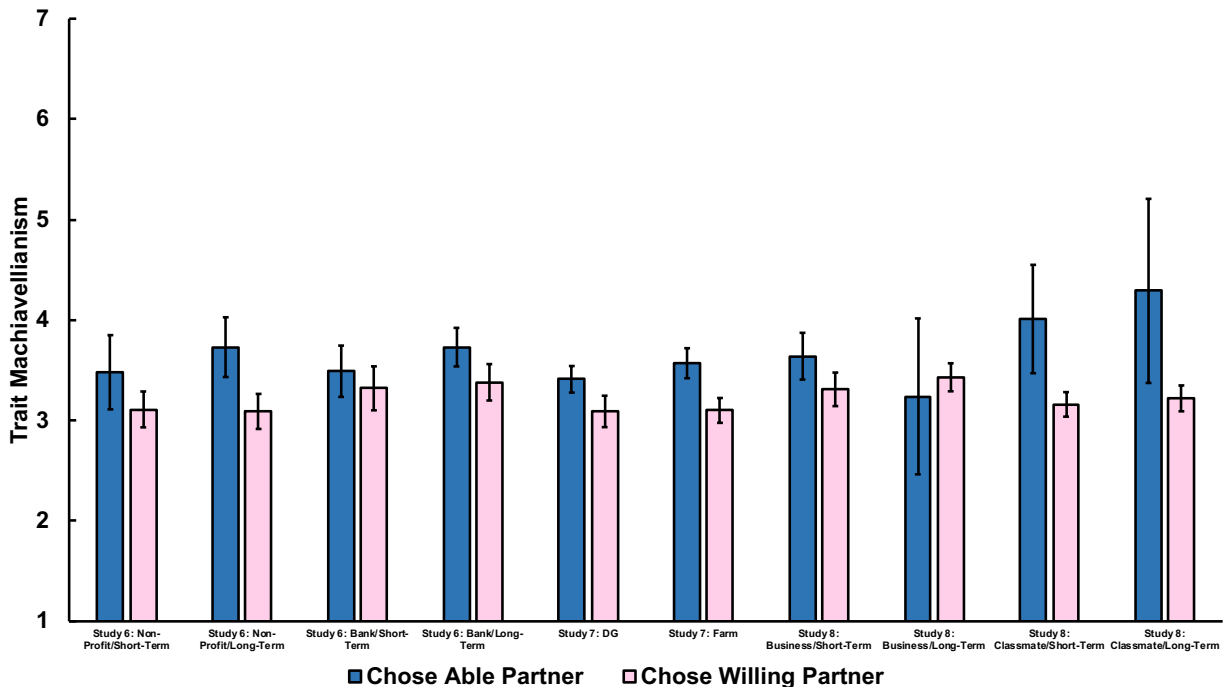


Figure 8: Level of Trait Machiavellianism amongst those who chose able versus willing partners across Studies 6, 7, and 8. Error bars represent 95% confidence intervals.

Discussion

This study demonstrates that the reputational benefits we observed in previous studies within the contexts of the DG, business vignette, and farming vignette generalize to other social contexts and we replicate our primary effect when operationalizing ability versus willingness as popularity versus kindness. Importantly, we again replicate our honest signalling effect by showing that those who choose willing partners not only are more generous in economic games but, as mirrored in Studies 5 and 6, also score lower on measures of immoral personality traits. Replicating another result from Study 6, we find that people value willingness significantly more when deciding on a partner for a long-term versus short-term relationship. Both of these findings

support our costly signalling framework. If people who choose willing partners are less likely to be manipulative and are more interested in seeing a relationship last into the long run, such people are more likely to have relationships that last into the long run. Thus, greater incentives exist for such people to choose willing over able partners. On the other hand, given the higher level of immoral character traits among those who choose able partners, such people may be more likely to have relationships that dissolve in the long run. Therefore, it is more beneficial for such individuals to value ability over willingness. Given that they are less likely to be in long-term relationships, they are unable to derive the benefits necessary to make pairing with willing partners adaptive.

Also noteworthy is that, unlike in the DG where people saw those who choose able partners as being more competent, here we find that those who choose willing partners are seen as more competent. This may be due to the increase in contextual factors that could render the partner decision less transactional and more personal, relative to the DG. Also interesting is that in the business partner condition those who chose to partner with the willing partner for a short-term business partnership reported being *more* narcissistic. This unexpected result fits broadly with our results from Study 5, showing that people who choose willing partners believe themselves to be worthier of praise and expect others to view them as highly competent and warm. On the other hand, those who chose to partner with the popular classmate for a short-term partnership reported being more narcissistic. This result may stem from narcissistic types' viewing themselves as being popular and therefore seeing the popular classmate as a good match (Jonason & Schmitt, 2012).

Study 9: Signaling Benefits of Refusing to Partner with Able but Unwilling Partners & Moderation Based on Reputational Incentives & Honest Signal of Dark Triad Traits

Across Studies 1-3 and Studies 5-8 participants were presented with a scenario where a Chooser decided between two potential partners, and in Study 4 participants were presented with a scenario where a Chooser decides between four potential partners. While choosing between multiple partners does indeed reflect common dilemmas people face, sometimes people are instead faced with one potential partner and must choose whether to accept their partnership or refuse their partnership. In Study 9 we examine whether people gain reputational benefits for choosing to partner with, rather than reject, willing but less able partners and whether they gain reputational benefits for choosing to reject, rather than partner with, able but less willing partners. We also examine whether people modulate their partner choices in such contexts depending upon situational goals and incentives. Finally, we again examine whether partner choice in this context serves as an honest signal.

Methods

A total of 399 workers from Amazon Mechanical Turk were recruited to participate. A total of 114 participants (28.6%) were excluded based on preregistered exclusion criteria. This left data from a total of 285 participants (43% Male; Mean age = 42.35, $SD = 12.45$) to be analysed.

There were four conditions in this study. Half of the participants were randomly assigned to read about a CEO who is deciding whether or not to partner with a wealthy overseas manufacturer who can benefit the company's profit margin (high ability) but does not treat their workers with care (low willingness). Participants in this group were then randomly assigned to read that the CEO either accepted or rejected the partnership with the manufacturer. The other

half of the participants were randomly assigned to read about a CEO who is deciding whether or not to partner with a small overseas manufacturer who cannot benefit the company's profit margin (low ability) but does treat their workers with care (high willingness). Participants in this group were then randomly assigned to read that the CEO either accepted or rejected the partnership with the manufacturer.

After reading about the chooser's decision, participants evaluated the chooser on how trustworthy and moral, how emotional and logical, and how warm and competent they seemed. We measured perceived warmth with four items (warm, good-natured, tolerant, and sincere) and we measured perceived competence with five items (competent, confident, independent, competitive, and intelligent). These items were previously validated in prior research (Wojciszke, Abele, & Baryla, 2009). In alignment with our previous studies, we then averaged our measures of morality, trustworthiness, emotionality, and warmth into one index to indicate perceived morality. We also averaged our measures of logicity and competence into one index to indicate perceived competence.

Next, participants were asked to what extent they would want to work for the CEO, purchase products from the CEO's company, and invest in the CEO's company. We then averaged these three measures into one index to indicate desire to associate with the CEO. Then participants were asked if they were the CEO, whether they would have chosen or rejected the manufacturer they read about. To manipulate the reputation incentives and anonymity of the choice, half of the participants additionally were asked to make this decision while considering that they (as the CEO) wanted to build a reputation as an ethically responsible brand and signal to their consumers that they care about social issues. This group was also told to imagine that their decision would be made public to potential consumers.

Finally, participants completed a modified measure of trait Machiavellianism (Christie & Geis, 1970), narcissism, and psychopathy (Jones & Paulhus, 2014). Before conducting this study, methods, hypotheses, and analysis plans were preregistered and can be accessed at:

<https://aspredicted.org/blind.php?x=in9hs3>

Results

Test of Hypothesis 1

Participants rated those who rejected the able manufacturer as more moral ($M = 7.30$, $SD = 1.22$ vs. $M = 2.71$, $SD = 1.41$), $t(145) = 21.10$, $p < .001$, $d = 3.47$ and more competent ($M = 6.40$, $SD = 1.34$ vs. $M = 5.36$, $SD = 1.95$), $t(145) = 3.80$, $p < .001$, $d = .62$ relative to those who chose the able manufacturer.

Participants rated those who chose the willing manufacturer as more moral ($M = 6.66$, $SD = 1.36$ vs. $M = 3.87$, $SD = 1.55$), $t(136) = 11.25$, $p < .001$, $d = 1.91$ and directionally, albeit non-significantly, more competent ($M = 6.32$, $SD = 1.25$ vs. $M = 5.89$, $SD = 1.87$), $t(136) = 1.61$, $p = .11$, $d = .27$, relative to those who rejected the willing manufacturer.

Bootstrapped results using 10,000 resamples showed a moderated mediation effect, such that perceived morality mediated the effect of prospective manufacturer type on desire to associate with the CEO when both rejecting the prospective manufacturer and when choosing the prospective manufacturer (Reject: $b = -4.07$, $SE = 0.300$, 95% CI = -4.65, -3.48) (Chose: $b = 4.69$, $SE = 3.03$, 95% CI = 4.10, 5.27). The index of moderated mediation was also significant (index = 8.76, $SE = .457$, 95% CI = 7.86, 9.65). See Figure 9 for a graphical depiction of how desire to associate with the CEO varied across conditions.

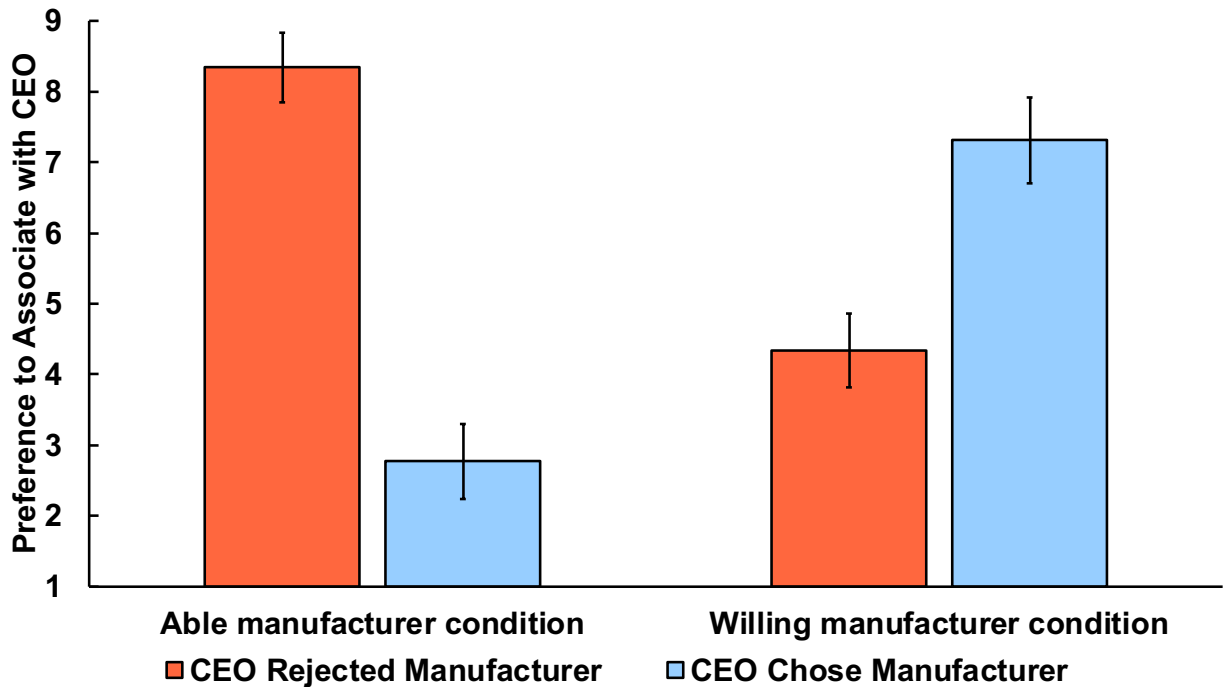


Figure 9. Preference to associate with the CEO who either chose or rejected the able or willing manufacturer. Error bars represent 95% confidence intervals.

Test of Hypothesis 2b

Next, we examined whether participants' desire to choose or reject certain partners varies depending upon the incentive structure of their environment. Specifically, in the treatment condition, participants were asked to imagine as CEO that they wanted to build a reputation as an ethically responsible brand and signal to their consumers that they care about social issues. They were also told that their consumers would be aware of their choice as CEO. In the control condition participants were simply asked who they would choose to partner with as CEO. Participants expressed a greater desire to partner with the willing manufacturer in the treatment condition ($M = 7.33$, $SD = 2.19$ vs. $M = 5.86$, $SD = 2.54$), $t(136) = 3.65$, $p < .001$, $d = .62$ and they also directionally, albeit non-significantly, expressed less desire to partner with the able

manufacturer in the treatment condition ($M = 1.72, SD = 1.85$ vs. $M = 2.26, SD = 2.27$), $t(145) = 1.59, p = .11, d = .26$.

We did conduct a preliminary test (see Supplementary Materials) of this study where all results replicated, aside from one: we did not observe evidence of modulation when using a toned-down manipulation of anonymity. We sought to further clarify whether combining a simple manipulation of anonymity with a manipulation of other situational factors would produce evidence of modulation, and, as evidenced above, it did. We discuss possible reasons for variability in results in the discussion section.

Test of Hypothesis 3

We found that one's desire to partner with the able manufacturer was positively correlated with trait Machiavellianism ($r = .36, p < .001$), trait Psychopathy ($r = .45, p < .001$), and marginally with trait Narcissism ($r = .15, p = .07$). We also found that one's desire to partner with the willing manufacturer was negatively correlated with trait Machiavellianism ($r = -.19, p = .03$), trait Psychopathy ($r = -.21, p = .01$), and marginally with trait Narcissism ($r = -.14, p = .09$). See Figure 10 for a graphical depiction of how preference for a partnership with the manufacturer varied as a function of Dark Triad traits.

Bootstrapped results using 10,000 resamples showed Dark Triad traits to be a significant moderator of the relationship between prospective manufacturer type on desire to choose the manufacturer. Results indicated that prospective manufacturer type ($b = 10.32, SE = 1.05, p < .001$) and Dark Triad traits ($b = 1.09, SE = .23, p < .001$) were both associated with desire to choose the manufacturer. The interaction between prospective manufacturer type and Dark Triad traits was also significant ($b = -1.90, SE = .34, p < .001$), suggesting that the effect of prospective manufacturer type on desire to choose the manufacturer depended on Dark Triad

traits. Together, the variables accounted for approximately 56% of the variance in desire to choose the manufacturer, $R^2 = .56$, $F(3, 281) = 119.96$, $p < .001$.

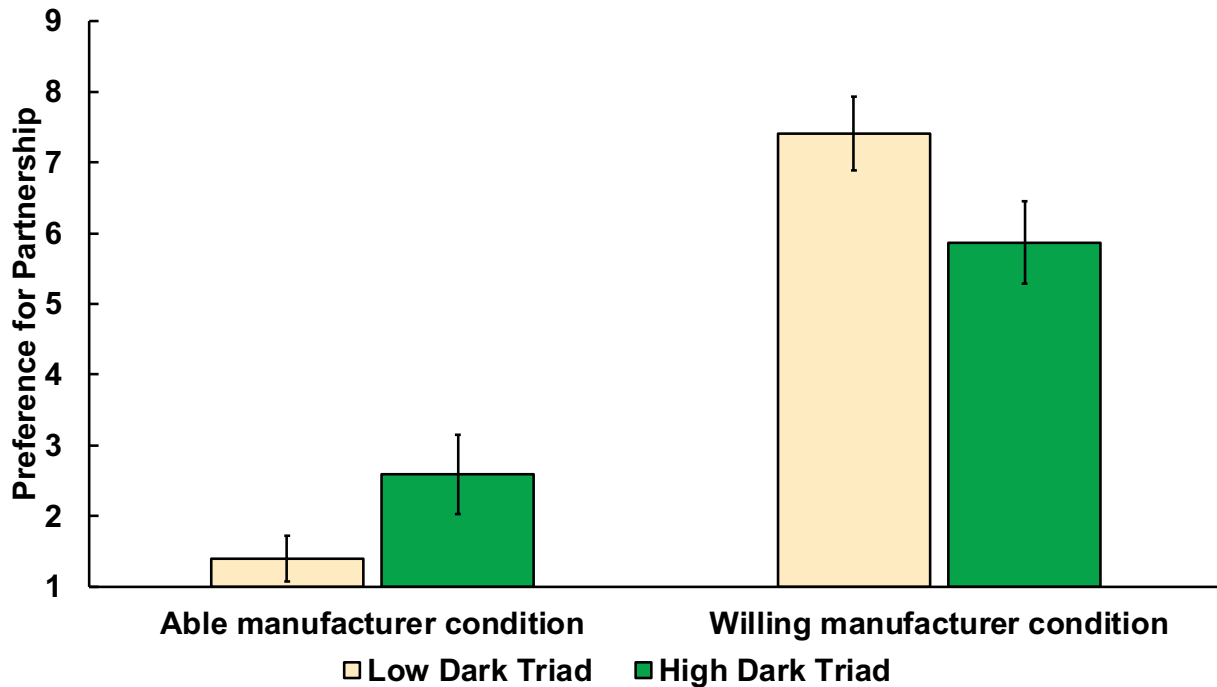


Figure 10. Preference for a partnership with the able and the willing manufacturers amongst participants scoring high or low on Dark Triad traits. Error bars represent 95% confidence intervals.

Discussion

Study 9 provides evidence that the signaling benefits of partner choice decisions extend beyond the context of choosing between multiple prospective partners to cases in which one is simply choosing to either partner with or reject a single prospective partner. We find that in such a setting simply rejecting a partnership with an able but less willing partner can garner one a reputation for being a moral partner. So much so that in the context we evaluated, people express a greater desire to work for, consume from, and invest in a CEO who chose to make such a decision.

We also replicate findings from our previous studies within this paradigm: a combination of reputational incentives and situational goals modulate partner choice decisions, and simply refusing to partner with an immoral partner is a costly signal of lower levels of Dark Triad traits. It is noteworthy that anonymity alone did not modulate partner choice in this paper, as evidenced in Study 5 and in an earlier iteration (see Supplementary Materials) of what we tested here in Study 9. On the other hand, reputational incentives and situational goals do seem to elicit modulation, as evidenced here in Study 9 and in Study 6. It is not clear whether the null effect of manipulating anonymity is due to the inherent anonymity that comes via online experiments; it may be difficult to fully simulate the experience of making a public choice as a CEO within an anonymous online experiment. Future research could examine this question in laboratory or field settings.

General Discussion

As a highly social species, humans have to successfully navigate their social interactions by finding the best partners. Sometimes this involves choosing between individuals who are more willing and individuals who are more able. Here, we demonstrate that many people (sometimes the majority, sometimes a large minority) opt for a partner who is more willing to cooperate, forgoing the immediate material gains of instead partnering with someone who is more able. Despite such costly partner choice decisions being beneficial for the group, what makes such behaviour adaptive for the individual chooser? Furthermore, why do people purport to care so much about willingness traits in others, when in reality ability traits take precedence? Across 9 studies and a formal model we provide a potential answer: Choosing willing over able partners affords reputational and partner choice benefits.

Across our studies we provided evidence of a second-order partner choice selection effect. In particular, in Study 1 we found with a university sample that choosing a willing partner over an able partner (i) affords one a moral reputation, and (ii) makes one more likely to be chosen as a cooperation partner. In Study 2, we replicated this second-order partner choice selection effect with a sample of workers recruited from MTurk using an incentivized experiment with real money at stake. Interestingly, we found that this preference held irrespective of people's own preference for able versus willing others. That is, even people who choose able partners for themselves prefer others who choose willing partners.

In Study 3 we found that people also view the act of choosing willing partners as being more praiseworthy, but it appears that this judgment is influenced by whether people prefer willing or able partner for themselves. Importantly, we also found in Study 3 that those who choose willing partners are more generous in an economic game. This adds support to our theoretical model. In Study 4 we found that people can gain reputational benefits for valuing both willingness and ability, but the benefits of valuing willingness exceed the benefits that come from valuing ability. Furthermore, we see in Study 4 that our results are not a product of valuing partners who are unable; a partner has to exhibit willingness in order for a chooser to accrue reputational gains. We next examined in Study 5 whether people accurately predict the signal they are sending via their partner choice decisions. We find that people are by and large accurate in their meta-awareness of what they are signaling via their partner choice.

In Study 6 we found that people modulate their choice of partner based both on certain types of reputational incentives present in their environment as well as whether they are choosing a partner for a long-term rather than short-term partnership. In Study 7 we found further evidence of adaptive design in the psychology of the signaler: people who choose willing partner

experience less reputational concerns after making such a partner choice. In Study 8 we demonstrate the generalizability of our primary effect by showing that our effect replicates not only when ability is operationalized as wealth or skill but also when ability is operationalized as high social status. We find that the effect sizes observed with these new operationalizations were even larger than what we observed with the DG, providing further support for the robustness of our effect.

In Study 9 we found that our effect extends to a sequential choice context where instead of choosing between multiple prospective partners, the chooser is simply choosing to either partner with or reject a prospective partner. We find that in such a context simply rejecting a partnership with an able but less willing partner can signal moral character traits to observers. For example, in the context we examined observers expressed a greater desire to work for, consume from, and invest in a CEO who chose to make such a decision. We also found that this signal is honest: simply refusing to partner with an immoral partner is a costly signal of lower levels of Dark Triad traits.

In support of our formal model we also find across Studies 6 and 8 that people are more likely to favour willingness over ability in the partner choices when deciding upon a partner for a long-term rather than short-term relationship. And as further support of our model, we find across Studies 6, 7, 8, and 9 that people who choose willing over able partners also score lower on a psychometric measure of trait Machiavellianism. Together these findings provide support for our premise that a separating equilibrium exists where moral types are more likely to choose willing over able partners in part because moral types will sustain the relationship long enough to reap the benefits of paring with a willing partner.

In total, our findings suggest that, from an ultimate perspective, the tendency to value willingness when making partner choice decisions may be understood within a reputation-based framework (Barclay, 2013, 2015; Jordan & Rand, 2019). Although people have more to gain materially in the short-term from partnering with a more able partner, people have more to gain reputationally from partnering with a more willing partner. Our findings suggest that these reputational benefits translate into cooperative benefits, with those choosing willing partners being more likely to be chosen as cooperation partners in subsequent interactions. Importantly, we find that choosing a willing partner appears to be an honest signal—those who choose willing partners score higher on individual difference measures of moral character and behave more generously in economic games.

We hope that the arguments put forth here encourage investigations into the functional underpinnings of various social psychological phenomena. For example, research on contagion has shown that people desire objects that are associated with admired individuals (Newman, Diesendruck, & Bloom, 2011) and dislike objects that are associated with despised individuals (Rozin, Millman, Nemeroff, 1986). Research on stigma by association has shown that when a non-stigmatized individual is associated with a stigmatized individual, the stigma transfers to the previously non-stigmatized individual (Neuberg, Smith, Hoffman, & Russell, 1994). And foundational findings in social psychology show that people bask in the reflected glory of successful others (e.g., Cialdini et al., 1976; Cialdini & Ableardson, 1980), make efforts to avoid being associated with odious others (Cooper & Jones, 1969), and experience guilt by association with a group with a negative history (Doosje, Branscombe, Spears, & Manstead, 1998). We hope the signalling-based framework proposed here can help elucidate why people think and behave

in this fashion (e.g., Kupfer & Giner-Sorolla, 2021): people's choices of partners are indicative of their own morality – sometimes you really can judge someone by the company they choose.

Limitations and Future Directions

We did not examine the reputation that is gained by selecting someone for a specific duty, such hiring an employee for a certain job, where the chooser may have a mandate to select the most qualified individual (Behling, 1998; Barrick & Mount, 1991). Instead, we examined the act of choosing a partner for a cooperative interaction. We explored this question within the context of choosing to partner with a more generous versus more rich dictator in the DG, more fair versus more rich business partner on a business deal, more generous versus more skillful farming partner on a new farm, and more kind versus more popular classmate at school. Countless other examples can be constructed, e.g., choosing to partner with a more helpful versus more skillful fellow employee on a team project; choosing to partner with a more committed versus more attractive romantic partner. For example, the virtues of generosity, fairness, and kindness do not encompass all that people deem moral. Future research could examine whether our results replicate when examining other moral traits such as caring for one's family, being loyal to one's group, being brave and heroic, or showing deference and humility (Curry, Chesters, & Van Lissa, 2019; Curry, Mullins, & Whitehouse, 2019). Are people who choose partners who exhibit an adherence to such virtues also afforded with reputational benefits? Also, it would be useful for future research to examine whether those who choose willing partners continue to enjoy reputation and partner choice benefits if their partnering with willing over able partners leads to the subsequent failure at certain tasks, particularly tasks that carry important ethical consequences.

We also note that the hypothesis being proposed here does not preclude a role for other mechanisms in the prioritization of willingness over ability during partner choice. For example, both assortative pairing (Robinson et al., 2017; Thiessen & Gregg, 1980; Zietsch, Verweij, & Heath, 2011) and the fact that greater variance exists across individuals in willingness traits compared with ability traits (Eisenbruch & Krasnow, 2019; Kawamura & Barclay, unpublished data) may additionally explain why some individuals prioritize willingness. Furthermore, willingness may also be favored in others insofar as it is perceived to be a more domain general trait, whereas ability may be perceived to be more domain specific and thus less beneficial outside specific domains. Future research should examine which of these hypotheses provides the greatest explanatory power.

Conclusion

Choosing partners can be challenging and costly. Often, individuals value a partner's willingness over their ability to deliver benefits, even when choosing the willing partner is immediately costly. Why would people make the costly decision to partner with someone who cannot provide as much? Here, we present evidence for an ultimate explanation: people who choose a willing partner are more likely to gain a moral reputation and are more likely to be chosen themselves as cooperation partners. Furthermore, in such cooperative interactions, those who choose willing partners are in fact more cooperative with others. Taken together, our findings provide a functional account for why some individuals make the costly decision to value willingness over ability when making partner choice decisions.

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