



Sometimes we want vicious friends: People have nuanced preferences for how they want their friends to behave toward them versus others

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ABSTRACT

Intuition and research alike suggest that people prefer friends to be prosocial—particularly kind and trustworthy. Here, we examine these preferences in light of the fact that dyadic friendships are embedded in wider social networks. Because our friends recurrently interact with other people, and these friend-other interactions can have various positive and negative effects on us, people should possess distinct preferences not only for how our friends behave toward us *but also* for how friends behave toward different other people (e.g., strangers, rivals). In six studies ($N = 1183$; two pre-registered) with complementary designs and cross-national samples (U.S. community, U.S. student, India community), we find: (a) When the targets of best friends' behavior are not specified, people's friend preferences track how one wants friends to behave toward oneself. Replicating patterns found in past work, (b) people generally want friends to be kinder and more trustworthy than not. But (c) people also want friends to be more prosocial toward oneself than toward others, and (d) people *sometimes* prefer friends who are more vicious than prosocial, for instance, toward one's enemies. These findings challenge some long-held conclusions about friend preferences, expand the known range of traits preferred in close relationship partners, and enrich our understanding of what it means to deem people, for example, "kind," as such evaluative personality concepts may by default be indexed to the self.

In October 2018, the City Council of Philadelphia, Pennsylvania—the city of brotherly love—passed a formal resolution welcoming a new sports mascot, Gritty. It read: "...Gritty may be a hideous monster, but he is our hideous monster."

(Gym, 2018)

1. Introduction

Most work on close relationships, especially friendships, tends to focus on the dyad and thus on how people want to be treated by their dyadic partners (i.e., their friends) (Hall, 2012; Huang, Ledgerwood, & Eastwick, 2020; Sprecher & Regan, 2002; Wiseman, 1986). What matters is that one's friend treats one well. In line with such thinking, robust evidence suggests that people prefer friends who are, for example, kind

to them and disfavor those who are vicious to them (e.g., Cottrell, Neuberg, & Li, 2007; Fehr, 1996; Hall, 2011, 2012; Perlman, Stevens, & Carcedo, 2014; Sprecher & Regan, 2002). Somewhat similarly to such 'canonical' findings, 'cooperative accounts' of partner choice might predict that what matters is a friend's overall prosociality—to oneself or others—and so people should prefer friends who are maximally prosocial (to oneself and others) (for reviews—but not necessarily support for—such accounts, see Barakzai & Shaw, 2018; Hess & Hagen, 2006).¹

Here, we integrate adaptationist theories of friendship, which emphasize friends' roles in providing one another preferential social support (DeScioli & Kurzban, 2009; Tooby & Cosmides, 1996), with our embedded dyad framework, and we test subsequent predictions about what people want in friends. Briefly, the embedded dyad framework emphasizes that dyads (e.g., friend pairs) exist embedded in wider and

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¹ Although these works present reviews, the works themselves are not necessarily supportive of cooperative accounts. For example, Barakzai and Shaw (2018) test and support their hypotheses against those derived from cooperative accounts.

often densely interconnected social networks, wherein one's friends inevitably interact with other people (e.g., Basyouni & Parkinson, 2022; Dunbar, 2018, 2021). As implied by both this framework and adaptationist theories of friendship, friend-other interactions are not only a recurrent feature of the social landscape, but they can also have potentially profound effects on one's friends, one's friendships, and (thus) one's outcomes. Together, these lines of work suggest that friends should, on average, radiate positive effects on the self—both *directly* (via friend behavior toward the self) and also *indirectly* (via friend behavior toward others). If friends interacted only with oneself, then we would expect people to prefer friends who are maximally and solely prosocial. But because one's friends also interact with other people, including one's rivals, we suggest that people might sometimes prefer friends who behave with greater monstrosity than brotherly love—extending and sometimes challenging expectations from canonical work on friend preferences and cooperative accounts of partner choice.

1.1. Friendship, friend preferences, and competing theories of friend preferences

Friends are associated with many benefits to health and happiness (see, e.g., Dunbar, 2018, 2021). Friends may have also helped one another solve several recurrent fitness challenges, from ensuring sufficient access to resources for survival to winning agonistic conflicts (e.g., DeScioli & Kurzban, 2009; Tooby & Cosmides, 1996; Williams, Krems, Ayers, & Rankin, 2022). But presumably, such benefits depend(ed) on securing good friends—those able and willing to help one meet one's needs. Friend preferences may thus play an important role in the formation of such friendships. Friend preferences are thought to guide people to invest their finite time and energy on attracting and maintaining friends who fit this bill (e.g., Conroy-Beam & Buss, 2016; Krems & Conroy-Beam, 2020; but see, Huang et al., 2020).

1.1.1. Friend preferences

What do people want in friends? Theoretically, there are myriad preferences that people could prioritize in friends—intelligence, left-handedness, physical attractiveness, dislike of cats, formidability, detached earlobes (e.g., Benenson, 2014; Eisenbruch and Roney, 2020; Hall, 2011; Lewis et al., 2011; Lukaszewski, Simmons, Anderson, & Roney, 2016; Williams et al., 2022). But decades of research seem to paint a clear picture of people's friend preferences²: Although not an exhaustive list, people tend to most prefer friends who are kind and trustworthy (e.g., Andreoni & Bernheim, 2009; Barclay, 2016; Cottrell et al., 2007; Erikson, 1950, 1964; Gurven & Winking, 2008; Hall, 2011; Hatfield, Traupmann, & Sprecher, 1984; Holmes & Rempel, 1989; Panchanathan & Boyd, 2004; Rempel, Holmes, & Zanna, 1985; Schwartz & Bardi, 2001; Shaw, DeScioli, & Olson, 2012; Yamagishi & Yamagishi, 1994). For example, people sometimes compete for friends by advertising their kindness (Barclay & Willer, 2007; Reis & Gruen, 1976). People also value trustworthiness even over other desired traits, including intelligence and attractiveness (Cottrell et al., 2007).

Although less work examines traits *disfavored* in friends, people tend to eschew those who seem vicious or indifferent (e.g., Benenson, 2014; Hall, 2011, 2012; Shinada, Yamagishi, & Ohmura, 2004; Walster, Berscheid, & Walster, 1973).³ For example, people not only prefer kind friends, but they also disfavor the appreciably unkind, such that disagreeable individuals tend to be befriended less (Jensen-Campbell, Knack, Waldrip, & Campbell, 2007; Nettle, 2006; Selfhout et al., 2010).

² Here, we focus on a few friend traits that seem most highly and universally valued (or disfavored).

³ Consider a 0 (*none*) to 10 (*extreme*) scale of kindness. On such a scale, 0 should indicate no kindness, but not necessarily any *unkindness* or what one might deem full-fledged viciousness. Thus, we explore disfavored traits separately from favored traits.

People also strongly prioritize friends' reciprocation of valuation and caring. A lack of reciprocated care from friends can end relationships (Delton & Robertson, 2016; Delton et al., 2023; Kenny & La Voie, 1982; La Gaipa & Wood, 1981; Rose, 1984; Shaw, DeScioli, Barakzai, & Kurzban, 2017; Walster et al., 1973). Though more tentative, people might also disfavor exploitative or impartial friends. People detect and avoid cheaters (e.g., Cosmides & Tooby, 1992), and, even as people consider impartiality a virtuous and desirable trait (Tyler, 2000), people consider friends' impartiality *toward them* undesirable (Shaw et al., 2017).

We additionally note that classic work in social psychology suggests that relationship partners tend to be similar, familiar, and nearby (Barry, 1970; Bornstein, 1989; Byrne, 1971; Newcomb & Svehla, 1937; Zajonc, 1968). This does not imply that these traits are necessarily prioritized in friendship formation, however (DeScioli & Kurzban, 2012).

1.1.2. Theories of friend preferences

Previous work in social psychology, relationship science, and related areas has often tended to focus on *dyadic* relationship processes (see, e.g., Basyouni & Parkinson, 2022; Dunbar, 2018; Fehr, 1996; Merrie, Krems, & Sznycer, n.d.). In line with this, friend preference research has tended to focus on the friend dyad, explicitly or implicitly. For example, participants might respond to items assessing how friends should behave *toward oneself*: “can make me laugh” (Oswald, Clark, & Kelly, 2004), “will cheer me up when I am sad” (Zarbatany, Conley, & Pepper, 2004), “really listens to what I have to say” (La Gaipa, 1987), “goes out of his/her way to help me” (Bank, 1994). Other friend preference measures—for example, asking about whether an ideal friend “is helpful” (e.g., Krems & Conroy-Beam, 2020; Williams et al., 2022)—could also be inferred as implicitly asking about ideal behavior toward oneself (e.g., “is helpful to me”; see Lukaszewski & Roney, 2010). In all, this work has generated a rich body of knowledge about friend preferences (see Hall, 2012), which we refer to as *canonical preferences*. Again, this work generally suggests that people prefer friends who are maximally prosocial (toward oneself) and eschew friends who are antisocial (toward oneself).

Another body of work on partner choice has focused on the importance of a partner's prosociality or cooperativeness. These *cooperative accounts* typically assert that people select partners (e.g., friends) based on the cooperative benefits they could provide (e.g., Baumard, André, & Sperber, 2013; Kenny, Mohr, & Levesque, 2001; Rand & Nowak, 2013), which can be gleaned from reputational information. On this view, people should prefer partners who have—and/or have reputations for—maximal prosociality—both toward oneself (direct reciprocity; e.g., preferring those kind to us) and others (indirect reciprocity; e.g., preferring those kind to others; for a review of cooperative accounts, see Hess & Hagen, 2006). Such accounts might additionally predict that people prefer friends who behave with minimal viciousness, indifference, or other dimensions of antisociality—again, toward oneself or others.

We derived additional predictions from an integration of our *embedded dyad framework* with adaptationist models of friendship. Briefly, this framework emphasizes that dyadic relationships (here, friendships) are embedded in wider networks, wherein one's friends inevitably interact with and have their own relationships with other people. These interactions can affect one's friends, one's friendships, and (thus) one's own outcomes in potentially profound ways—both positive and negative (e.g., Ackerman, Kenrick and Schaller, 2007; Barakzai and Shaw, 2018; Benenson, 2014; Jordan, Sommers, Bloom, & Rand, 2017; Klein & Milardo, 1993; Krems, Williams, Aktipis, & Kenrick, 2021; Krems, Williams, Merrie, Kenrick, & Aktipis, 2022; Owens, Shute, & Slee, 2000; Parker, Low, Walker, & Gamm, 2005; Shaw et al., 2017; Sugiyama, 2004).

This social complexity is also implied by adaptationist models of friendship, which emphasize friends as social insurance for times of illness, injury, or conflict. Consider a situation of drought and starvation;

whereas strangers are unlikely to invest resources in a starving person, because that person looks like a bad bet for reciprocity, the starving person's friends might indeed share their finite resources with them *even over others facing similar need* (Tooby & Cosmides, 1996). By doing so, the sharing friend ensures the continued survival of a person who has a stake in their own welfare, and who would thus help them in their future times of trouble. Likewise, consider an agonistic conflict between Alex and Benji—both of whom are Cam's friends. According to the Alliance Hypothesis of Friendship, Cam should side with the friend who is more likely to take Cam's side in later conflicts, which ensures the continued survival of Cam's likeliest supporter (DeScioli & Kurzban, 2009; DeScioli, Kurzban, Koch, & Liben-Nowell, 2011).

Taken together, the embedded dyad framework and these adaptationist models imply that the benefits of friendship depend, in part, on how much one's friends value oneself relative to others, and thus that a friend's behavior toward others can influence one's own outcomes. For example, if Cam takes Alex's side in the above dispute, Cam is also siding against Benji. If people are affected by friends' behavior toward the self and toward others, then people should possess preferences for how friends behave toward the self and toward others. Specifically, insofar as friends generally radiate positive effects on the self—not only directly (via how they behave toward oneself) but also indirectly (via how they behave toward others)—people's friend preferences should be systematically predictable, such that (1) the friendship value of a target to the self is a function of the effects the target has (or is expected to have) on the self, both directly and also indirectly, and (2) the value of a trait in the target (e.g., the value of a friend's viciousness) to the self depends on the net effects (direct and/or indirect) that trait will have on the self, which is affected by toward whom that trait is directed. In other words, good friends should benefit or at least not hinder us, even as via their behavior toward other people.

This leads to predictions that extend, deviate from, and sometimes run counter to other accounts and intuition (e.g., people always eschew vicious friends). For example, imagine that your friend Amani demonstrates trustworthiness—but she does so by keeping in confidence your enemy's secret plan to harm you. Meanwhile, your friend Blanca demonstrates viciousness—but does so by deterring your enemy from harming you. As this example illustrates, in addition to the obvious and important (direct) effects that interactions with our friends can have on us, our friends' interactions with other people can also have major (indirect) effects on us as well. Note that, if you evaluate Amani and Blanca as friends via (a) intuition, (b) the inferences one might draw from canonical findings, or (c) cooperative accounts, you might conclude that Amani (trustworthy) is a better friend than Blanca (vicious). If you consider, however, the net (both direct and indirect) effects that Amani and Blanca have on your welfare, you would reach the opposite conclusion.

1.2. Overview of current predictions

Previous work on friend preferences and cooperative accounts of partner choice generate multiple and sometimes competing predictions about how people will want ideal best friends to behave, as compared to our novel embedded dyad perspective.

First, work on friend preferences has, either explicitly or implicitly, addressed *self-directed* friend preferences—or how people want friends to behave toward them (see, e.g., Hall, 2012). We thus test whether (1) asking people how they want friends to behave (target-unspecified friend preferences) generates the same pattern of responses as asking how people want friends to behave *toward them* (self-directed friend preferences) (for a similar examination of mate preferences, see Lukaszewski & Roney, 2010). If unspecified friend preferences track self-directed (more than other-directed) friend preferences, this would be consistent with our argument that people prefer friends to behave differently toward the self versus others.

Second, and in line with canonical findings, we expect that people

will generally prefer friends to be kind and trustworthy (but not vicious or indifferent)—both toward oneself and toward most others, as people tend to attach positive value to the welfare of other community members. Specifically, (2) for target-unspecified, self-directed, and neutral target-directed (i.e., stranger-directed) preferences, we predict that people will prefer friends to be kind and trustworthy, but not vicious, indifferent, or otherwise antisocial. Yet we also predict that (3) people will want friends to behave more prosocially *toward oneself* than *toward others*. After all, preferential prosociality may be part of the function of friends (e.g., DeScioli & Kurzban, 2009).

Further, the difference in preferred prosociality toward the self versus a stranger should be exaggerated when comparing preferences for how friends should behave toward oneself versus one's rivals. Indeed, people have rivalries and enemyships—relationships defined by competition and hatred (Adams, 2005; Holt, 1989)—which can harm one's outcomes (Aktipis et al., 2018; Günsoy, Cross, Uskul, Adams, & Gercek-Swing, 2015; Wiseman & Duck, 1995). Such relationships are often perceived as zero-sum; people believe they can be harmed when their enemies benefit (e.g., from others' kindness) and benefit when enemies are harmed (e.g., from others' viciousness; Aronson & Cope, 1968; Pietraszewski, 2016; Shaw, 2013). For a friend to achieve positive indirect effects on the self, that friend should not be kind toward one's enemy; rather, that friend should perhaps direct some degree of viciousness toward one's enemy. Thus, in some instances, we expect to see preferences for viciousness—counter to intuition, unlike in canonical findings, and at odds with cooperative account predictions. We test if (4a) people want friends who are appreciably more vicious toward one's enemies than they are toward oneself. We also test a stronger version of this prediction—(4b) that people prefer friends who are more vicious than kind toward one's enemies.⁴

We test these predictions in a two-wave study, in studies with varying designs, and in two nations. Methods were approved by university Institutional Review Board (IRB). All manipulations, focal (and exploratory) measures, and exclusions are noted. Data and syntax are on Open Science Framework (OSF) at <https://osf.io/xeg48/>.

2. Study 1

Following a pre-registered pilot, we conducted a pre-registered two-wave study. At Time 1, participants reported ideal same-sex best friend preferences with targets unspecified (reflecting theory and methods in previous research). At Time 2, participants reported preferences toward specific targets (how friends should behave toward self, strangers, enemies), following Lukaszewski and Roney (2010).

2.1. Method

2.1.1. Participants

In a pre-screening battery, 1539 (1050 female, 17 non-binary/other) U.S. undergraduates completed Time 1 items, with 359 (287 female, 4 missing) completing Time 2 items. In all, 298 people (238 female) completed Time 2 items and passed attention checks. Of those, 269 (220

⁴ Note that in preregistrations, we did not separate predictions 4a and 4b, and focused only on the latter. To prevent confusion and improve the clarity of our argument, we now separate these predictions here.

female, $M_{age} = 22.06$, $SD_{age} = 5.09$) completed both waves, yielding 0.80 power to detect small effects ($f \leq 0.10$) in differences on preference dimensions from Time 1 to Time 2.

2.1.2. Procedure

Following Lukaszewski and Roney (2010), we asked participants how their ideal same-sex best friends would behave. At Time 1, we assessed seven preference dimensions⁵ (see Table 1). Participants reported the extent to which each item would describe an ideal same-sex best friend’s behavior on a 7-point Likert-type scale (1 = *Not descriptive of my ideal best friend’s behavior*; 7 = *Very descriptive of my ideal best friend’s behavior*), thus assessing target-unspecified preferences. At Time 2 (later that same academic term), participants completed the above items, allowing for tests of Prediction 1, and additional items assessing preferences for impartiality and proximity toward three targets, described below. Items completed at both waves were used to test Prediction 1; all Time 2 items were used in testing Predictions 2–4.

At Time 2, participants were asked to report how they would like friends to behave toward three targets presented in randomized order: self, other/neutral target (a same-sex stranger), or the participant’s enemy (described as a person “who is competitive with you, mean to you, or who would be happy to see you fail”). In the *self* condition, participants rated the extent to which they would like each item to describe their best friend’s behavior toward them (1 = *Less ___ to me than the average man [woman]*; 4 = *Similarly ___ to me as the average man [woman]*; 7 = *More ___ to me than the average man [woman]*). In the neutral target (i.e., *stranger*) condition, participants rated the extent to which they would like each item to describe their best friend’s behavior

Table 1
Items assessing preferences for ideal same-sex best friend behavior across studies.

Kindness	Trustworthiness	Viciousness	Indifference
Kind	Trustworthy	Mean	Indifferent
Affectionate	Committed	Spiteful	Uninterested
Generous	Dependable	Unfriendly	Apathetic
Considerate	Honest	Malicious	Distant
Gentle	Reliable	Brutal	Aloof
Helpful	Sincere	Hostile	Unresponsive
Sensitive		Vicious	
Sympathetic			
Thoughtful			
Exploitative	Impartial		
Exploitative	Neutral (Never takes sides in friends’ conflicts)		
Manipulative	Impartial (Never shows favoritism in friends’ conflicts)		
Two-faced	Unbiased (Never favor one person over another in friends’ conflicts)		
Devious	Loyal (reverse-coded)		
Deceitful	Devoted (reverse-coded)		
Insincere	Shows preferential treatment (reverse-coded)		
Similarity	Familiarity	Proximity	
Similar	Familiar	Lives close by	
Has same values	Well-known	Often encountered in day-to-day life	
Has same interests			

⁵ We were limited by the number of items allowed on the initial battery (pre-screener), and thus assessed seven versus the planned, pre-registered nine dimensions. Additionally, in our pre-registration, we used the term “Neutral-indifferent” for what is here termed “indifference” and “Neutral-loyal [R]” for what is here termed “impartiality”. We chose to use “indifference” and “impartiality” here because they are clearer, easier-to-parse terms. Finally, in our pre-registration, we incorrectly specified the design of the project as having the target factor between versus within-subjects; due to a programming error, Time 2 targets were presented within-subjects.

toward a same-sex stranger (e.g., another man or woman) on a similar scale (1 = *Less ___ to other men [women] than the average person is*; 4 = *Similarly ___ to other men [women] as the average person is*; 7 = *More ___ to other men [women] than the average person is*). In the *enemy* condition, participants rated the extent to which they would like each item to describe the friend’s behavior toward the participant’s enemy on a similar scale (1 = *Less ___ to my enemy than the average man [woman]*; 4 = *Similarly ___ to my enemy as the average man [woman]*; 7 = *More ___ to my enemy than the average man [woman]*).

2.1.3. Demographic and exploratory measures

Across studies, participants completed common demographic questions (e.g., sex, age) and exploratory individual difference measures (e.g., intrasexual competitiveness; Buunk & Fisher, 2009; Fundamental Motives Inventory; Neel, Kenrick, White, & Neuberg, 2016). We did not expect strong or consistent sex differences in friend preferences. Overall, we find the same pattern of results across sex. We describe this in the Supplementary Material.

2.2. Results

Following the analysis plan from Lukaszewski and Roney (2010), we assessed Prediction 1 by connecting Time 1’s target-unspecified preferences to Time 2’s self-directed preferences, conducting a 7 [Preference Dimension] x 2 (Time/Target) Analysis of Variance (ANOVA), which yielded a main effect of Trait, $F(6, 1536) = 2213.60$, $p < .001$, $\eta^2 = 0.896$, and a significant interaction, $F(6, 1536) = 39.68$, $p < .001$, $\eta^2 = 0.134$.

Supporting Prediction 1, unspecified preferences tended to closely track self-directed preferences (see Fig. 1). See Table 2 for means (SEs) and significant differences between targets, as denoted by subscripts. (For full details on these between-target comparisons, see Tables S9-S10 in the Supplementary Material.) When preferences did diverge, participants reported slightly stronger preferences for kindness and similarity in the self versus unspecified conditions, and for greater trustworthiness and indifference in the unspecified versus self conditions ($ps < 0.001$). These differences between the unspecified and self conditions were smaller and less frequent than those differences derived from comparing the unspecified condition with either the stranger or enemy conditions. Additionally, there were no significant differences between the unspecified and self conditions in preferences for viciousness, being exploitative, and familiarity between the unspecified and self-directed conditions ($ps > 0.106$). Comparisons between preferences within each of the target conditions, respectively, are also reported in full in the Supplementary Material available online.

We next assessed Predictions 2-4b via a 9 [Preference] x 3 [Target: self, stranger, enemy] ANOVA on Time 2 responses, yielding significant

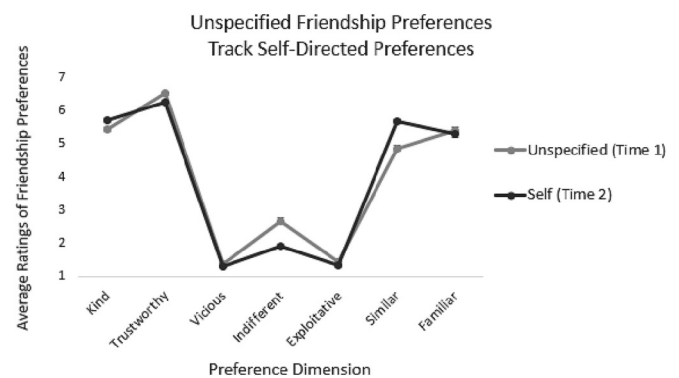


Fig. 1. Target-unspecified friend preferences (i.e., preferences for ideal same-sex best friends, in general) largely track self-directed friend preferences (i.e., preferences for how participants want ideal same-sex best friends to behave toward them) in Study 1. Error bars represent standard errors.

Table 2
Mean preference dimension ratings (Ses) by target for study 1.

Preference dimension	Unspecified	Self	Stranger	Enemy
Kind	5.45 _{bd} (0.07)	5.69 _{acd} (0.06)	5.27 _{bd} (0.07)	3.05 _{abc} (0.10)
Trustworthy	6.53 _{bcd} (0.05)	6.23 _{acd} (0.06)	6.50 _{abd} (0.08)	3.18 _{abc} (0.11)
Vicious	1.36 _{cd} (0.05)	1.37 _{cd} (0.05)	1.61 _{abd} (0.06)	3.18 _{abc} (0.10)
Indifferent	2.68 _{bcd} (0.08)	1.97 _{acd} (0.05)	2.31 _{abd} (0.06)	3.68 _{abc} (0.09)
Exploitative	1.44 _{cd} (0.05)	1.37 _{cd} (0.04)	1.62 _{abd} (0.06)	3.09 _{abc} (0.11)
Impartial	n/a	3.35 _{acd} (0.05)	3.48 _{bd} (0.05)	4.17 _{bc} (0.05)
Similar	4.87 _{bd} (0.09)	5.63 _{acd} (0.06)	4.66 _{bd} (0.08)	2.52 _{abc} (0.09)
Familiar	5.42 _{cd} (0.08)	5.27 _{cd} (0.08)	5.13 _{ad} (0.08)	2.78 _{abc} (0.09)

Note. For unspecified and self conditions, participants included 269 (220 female) individuals who completed ratings at both Time 1 (unspecified target preferences) and Time 2 (self-directed preferences) passing attention and bot checks. Impartiality and Proximity were completed only at Time 2. For those preference dimensions and for the stranger and enemy conditions, participants include 298 people (238 female) completing Time 2 items. Subscripts indicate statistically significant differences in preference dimensions between targets, such that within each row, the subscript “a” reflects that the value differs from the mean Unspecified value; the subscript “b” reflects that the value differs from the mean Self value; the subscript “c” reflects that the value differs from the mean Stranger value; the subscript “d” reflects that the value differs from the mean Enemy value.

effects of Preference, $F(8, 2376) = 597.81, p < .001, \eta_p^2 = 0.668$, Target, $F(2, 594) = 272.21, p < .001, \eta_p^2 = 0.478$, and a significant interaction, $F(16, 4752) = 356.89, p < .001, \eta_p^2 = 0.546$.

Supporting Prediction 2, we replicate the general pattern of preferences typically seen in friend preference work. Specifically, people in both the self and the stranger conditions preferred friends to be kinder and more trustworthy (i.e., prosocial) than vicious, indifferent, exploitative, or impartial ($ps < 0.001$). (This same pattern also held for preferences when targets were unspecified [$ps < 0.001$].)

We also supported Prediction 3—that people want friends to be more prosocial toward oneself than toward strangers. Complementing this in antisociality preferences, people also preferred friends to be less vicious, indifferent, exploitative, and impartial toward oneself than toward strangers. As one might expect, these differences were even greater when comparing self- versus enemy-directed preferences; that is, people want friends who are much more kind to oneself than to one’s enemies and who are much more vicious to one’s enemies than to oneself (supporting Prediction 4a).

However, we find mixed support for the prediction that people prefer friends to be significantly more anti- than prosocial toward one’s own enemies (Prediction 4b): People did not prefer friends to be significantly more vicious or exploitative than kind or trustworthy toward enemies ($ps > 0.490$), but people preferred friends to be significantly more indifferent and impartial than kind or trustworthy toward enemies ($ps < 0.002$).

We also explored preferences for similarity, familiarity, and proximity. Across studies, these track prosociality preferences and are reported in full in the Supplementary Materials.

3. Studies 2a and 2b

Studies 2a and 2b explore pre-registered predictions across nations (U.S., India), using a within-subjects design. This provides a complementary test of Prediction 1. We also test a predicted exception: People might prefer virtuous impartiality in general (when targets are

unspecified), but people might also possess comparatively diminished preferences for self-directed impartiality (Shaw et al., 2017; Tyler, 2000).

3.1. Method

3.1.1. Participants (2a)

Of 149 U.S. participants recruited from CloudResearch beginning the survey, 103 (49 female; 1 missing $M_{age} = 37.59, SD_{age} = 10.86$) passed bot and attention checks and were included in analyses, yielding 0.80 power to detect small effects ($f = 0.09$), assuming 0.5 correlation between measures.

3.1.2. Participants (2b)

Of 151 Indian participants recruited from CloudResearch beginning the survey, 82 (30 female, 10 missing; $M_{age} = 32.14, SD_{age} = 7.91$) passed attention and English comprehension checks (see Szynger et al., 2016) which were included given the nuanced preference items, and were included in analyses, yielding 0.80 power to detect small effects ($f = 0.11$), assuming 0.5 correlation between measures.

3.2. Design and procedure

Participants responded to items assessing ideal same-sex best friends’ behavior in all four conditions, first completing the target-unspecified condition. The presentation order of other targets—self, stranger, enemy—was randomized. Participants responded to assessments of nine preference dimensions, with prompts and measures the same as in Study 1.

3.3. Results

We conducted a 9 [Preference Dimension] x 4 [Target] within-subjects ANOVA in each sample. In the U.S. sample, this yielded main effects of Preference, $F(8, 808) = 337.63, p < .001, \eta_p^2 = 0.770$, and Target, $F(3,303) = 60.44, p < .001, \eta_p^2 = 0.374$, with a significant interaction, $F(24, 2424) = 139.08, p < .001, \eta_p^2 = 0.579$. Similarly in the India sample, this yielded main effects of Preference, $F(8, 584) = 65.72, p < .001, \eta_p^2 = 0.474$, and Target, $F(3, 219) = 7.15, p < .001, \eta_p^2 = 0.089$, with a significant interaction, $F(24, 1752) = 16.06, p < .001, \eta_p^2 = 0.180$.

See Tables 3a and 3b for means (Ses), and significant differences in trait dimensions between-targets comparisons. (See Tables S11a, S11b, S12a, and S12b in the Supplementary Material available online for full details of these between-target comparisons and for comparisons between preferences within each of the target conditions.)

We again find that how people report wanting friends to behave in general (in the target-unspecified condition) tracks how people want friends to behave toward oneself (supporting Prediction 1): Preferences in the unspecified conditions tracked reported preferences in the self-directed condition. There were only two significant differences, both in the U.S. ($ps_{India} > 0.180$; other $ps_{U.S.} > 0.093$): People wanted friends to be more exploitative toward oneself than toward unspecified targets ($p = .006$), which we did not expect. As expected, however, people reporting preferring friends to be more impartial in the unspecified versus the self condition ($p < .001$). This latter pattern was the same but nonsignificant in India.

Again replicating previous work and supporting Prediction 2, participants preferred friends to be more prosocial than antisocial when behaving toward unspecified targets, toward the self, or toward strangers in both the U.S. and in India ($ps < 0.001$).

However, people also want relatively preferential treatment from best friends (Predictions 3, 4a). U.S. participants wanted friends to be more prosocial toward them than toward strangers and much more prosocial toward them than toward enemies. This replicated in India with one exception: people did not prefer friends to be significantly more

Table 3a
Mean preference dimension ratings (Ses) by target for Study 2a (U.S.)

Preference dimension	Unspecified	Self	Stranger	Enemy
Kind	5.87 _{cd} (0.08)	5.85 _{cd} (0.10)	4.96 _{abd} (0.12)	2.62 _{abc} (0.16)
Trustworthy	6.42 _{cd} (0.06)	6.31 _{cd} (0.09)	5.19 _{abd} (0.12)	2.78 _{abc} (0.16)
Vicious	1.25 _{cd} (0.07)	1.36 _{cd} (0.08)	1.92 _{abd} (0.13)	3.81 _{abc} (0.18)
Indifferent	1.81 _{cd} (0.08)	1.83 _{cd} (0.10)	2.68 _{abd} (0.13)	4.43 _{abc} (0.16)
Exploitative	1.26 _{bcd} (0.07)	1.48 _{acd} (0.09)	1.95 _{abd} (0.13)	3.54 _{abc} (0.18)
Impartial	3.83 _{bcd} (0.09)	3.47 _{acd} (0.10)	4.07 _{abd} (0.08)	4.46 _{abc} (0.07)
Similar	5.69 _{cd} (0.09)	5.67 _{cd} (0.10)	4.35 _{abd} (0.13)	2.53 _{abc} (0.15)
Familiar	5.00 _{cd} (0.13)	5.22 _{cd} (0.14)	4.12 _{abd} (0.13)	2.73 _{abc} (0.16)
Proximate	4.96 _{cd} (0.14)	5.13 _{cd} (0.12)	4.12 _{abd} (0.11)	2.78 _{abc} (0.15)

Note. Mean (SE) ratings of preference dimensions by target-type. Mean computations include 102 (49 female) participants who passed bot and attention checks. Subscripts indicate statistically significant differences in preference dimensions between targets, such that within each row, the subscript “a” reflects that the value differs from the mean Unspecified value; the subscript “b” reflects that the value differs from the mean Self value; the subscript “c” reflects that the value differs from the mean Stranger value; the subscript “d” reflects that the value differs from the mean Enemy value.

Table 3b
Mean preference dimension ratings (Ses) by target for Study 2b (India).

Preference dimension	Unspecified	Self	Stranger	Enemy
Kind	5.58 _d (0.13)	5.55 _d (0.11)	5.42 _d (0.12)	4.28 _{abc} (0.21)
Trustworthy	5.68 _d (0.13)	5.69 _{cd} (0.11)	5.44 _{bd} (0.12)	4.38 _{abc} (0.20)
Vicious	3.21 _d (0.20)	3.25 _d (0.22)	3.38 _d (0.21)	4.10 _{abc} (0.19)
Indifferent	3.83 _d (0.08)	3.77 _{cd} (0.08)	3.93 _{bd} (0.08)	4.02 _{abc} (0.07)
Exploitative	3.19 _d (0.21)	3.28 _d (0.21)	3.26 _d (0.21)	3.90 _{abc} (0.19)
Impartial	3.42 _d (0.18)	3.29 _{cd} (0.18)	3.59 _b (0.16)	4.05 _{ab} (0.16)
Similar	5.26 _d (0.14)	5.22 _d (0.13)	5.01 _d (0.15)	4.19 _{abc} (0.20)
Familiar	5.55 _{cd} (0.15)	5.33 _d (0.14)	5.15 _{ad} (0.16)	4.35 _{abc} (0.20)
Proximate	4.85 _{cd} (0.14)	4.90 _d (0.15)	4.82 _d (0.14)	4.17 _{abc} (0.19)

Note. Mean (SE) ratings of preference dimensions by target-type. Mean computations include 82 (30 female) participants who passed English comprehension, bot, and attention checks. Subscripts indicate statistically significant differences in preference dimensions between targets. Subscripts indicate statistically significant differences in preference dimensions between targets, such that within each row, the subscript “a” reflects that the value differs from the mean Unspecified value; the subscript “b” reflects that the value differs from the mean Self value; the subscript “c” reflects that the value differs from the mean Stranger value; the subscript “d” reflects that the value differs from the mean Enemy value.

kind toward oneself than toward strangers. U.S. participants additionally wanted friends to be *more* vicious and indifferent—and exploitative, impartial—toward enemies than toward oneself. This pattern largely replicated in India, but not all comparisons were significant.

U.S. participants also wanted friends to be significantly more vicious ($ps < 0.001$) and indifferent ($ps < 0.001$)—or exploitative ($ps < 0.011$), impartial ($ps < 0.001$)—than prosocial toward enemies (Prediction 4b).

In India, no such comparisons reached significance ($ps > 0.800$). Note, however, that in India—as in the U.S.—preferences for antisocial traits were higher and preferences for prosocial traits were lower when one’s enemy is the target of friends’ behavior than when the self, a stranger, or no one is specified as the target of friends’ behavior.

4. Study 3

Study 3 tested Predictions 2–4 via a complementary between-subjects design. Participants reported what traits their ideal same-sex best friend should display toward one of three targets: the self, a stranger, or the participant’s enemy.

4.1. Method

4.1.1. Participants

Of 353 U.S.-residing CloudResearch participants beginning the study, 268 (141 female, 1 other; $M_{age} = 42.02$, $SD_{age} = 13.90$) passed bot and attention checks, yielding 0.80 power to detect small- to medium-sized effects ($f = 0.14$), assuming 0.5 correlation between repeated measures.

4.2. Design and procedure

Participants were randomly-assigned to one of three target conditions—self, stranger, enemy—wherein we assessed seven preference dimensions, as in previous studies.

4.3. Results

A 7 [Preference Dimension] x 3 (Target) mixed-factors ANOVA yielded main effects of Target, $F(2, 264) = 55.96$, $p < .001$, $\eta_p^2 = 0.298$, and Preference, $F(6, 1584) = 204.78$, $p < .001$, $\eta_p^2 = 0.473$, qualified by an interaction, $F(12, 1584) = 106.91$, $p < .001$, $\eta_p^2 = 0.448$.

Replicating the preference patterns seen in past work and supporting Prediction 2, people reported preferences for friends to be kinder and more trustworthy than vicious or indifferent toward them ($ps < 0.001$) and toward strangers ($ps < 0.001$). See Table 4 for means (Ses) and between-target comparisons; see also Fig. 2.

People also preferred friends to be more prosocial (and less antisocial) toward them than toward strangers (Prediction 3)—and to be much more prosocial (and much less antisocial) toward them than toward enemies (Prediction 4a). People additionally preferred friends to be *more* vicious and indifferent toward enemies than toward them (or strangers). See Table S13 for full inferential statistics comparing targets.

Supporting Prediction 4b, people reported preferring friends to be more vicious ($ps < 0.040$) and more indifferent ($ps < 0.001$) than kind or

Table 4
Mean Preference Dimension Ratings (Ses) by Target for Study 3.

Preference Dimension	Self	Stranger	Enemy
Kind	5.54 _{bc} (0.13)	5.12 _{ac} (0.12)	3.11 _{ab} (.12)
Trustworthy	5.96 _{bc} (0.14)	5.53 _{ac} (0.13)	3.28 _{ab} (0.13)
Vicious	1.18 _{bc} (0.12)	1.70 _{ac} (0.12)	3.73 _{ab} (0.12)
Indifferent	1.89 _{bc} (0.14)	2.33 _{ac} (0.13)	4.21 _{ab} (0.13)
Similar	5.49 _{bc} (0.12)	4.61 _{ac} (0.12)	2.72 _{ab} (0.12)
Familiar	4.84 _{bc} (0.13)	4.04 _{ac} (0.13)	3.20 _{ab} (0.13)
Proximate	4.91 _{bc} (0.13)	4.23 _{ac} (0.12)	3.12 _{ab} (.12)

Note. Mean (SE) ratings of preference dimensions by target-type. Mean computations include 268 (141 female, 1 other) participants who passed bot and attention checks. Subscripts indicate statistically significant differences in preference dimensions between targets. Subscripts indicate statistically significant differences in preference dimensions between targets, such that within each row, the subscript “a” reflects that the value differs from the mean Self value; the subscript “b” reflects that the value differs from the mean Stranger value; the subscript “c” reflects that the value differs from the mean Enemy value.

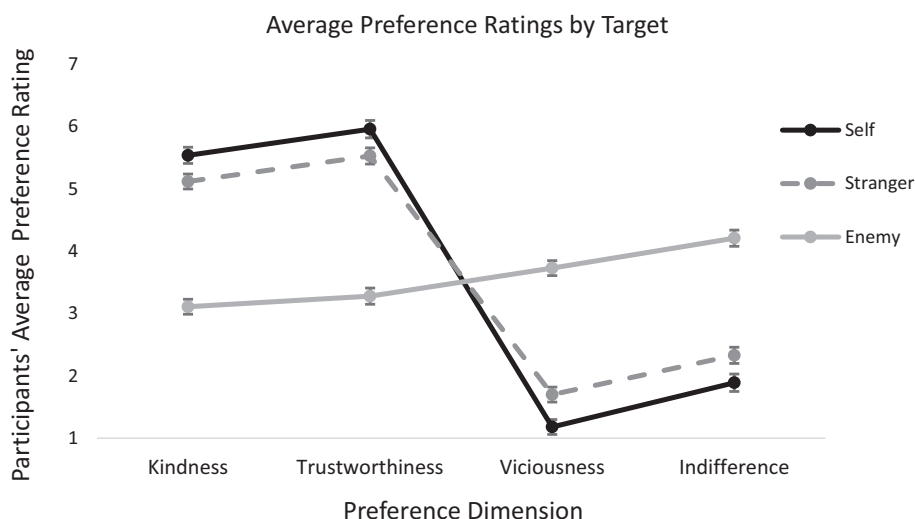


Fig. 2. Figure displays participants' average preferences for kindness, trustworthiness, viciousness, and indifference in their ideal same-sex best friend by target on the receiving end of those traits (self, stranger, or enemy) in Study 3. Error bars represent standard errors.

trustworthy toward enemies.

5. Discussion

Findings largely supported predictions derived from our integration of the embedded dyad framework with adaptationist models of friendship. First, people's preferences for how ideal same-sex best friends should behave (when no target was specified) tracked preferences for how those friends should behave *toward oneself* (for analogous findings regarding mate preferences, see [Lukaszewski & Roney, 2010](#)). This implies that any ambiguous items assessing, say, how "helpful" participants would like friends to be have addressed a single but important facet of friend preferences: how people want friends toward behave toward oneself. That target-unspecified preferences did not so closely track other- or enemy-directed preferences is also consistent with the argument that people want friends to behave differently toward the self versus others.

Second, as expected, we replicated the pattern of preferences found in canonical work: People generally want friends to be kinder and more trustworthy than vicious or indifferent—both toward oneself and toward neutral others (i.e., strangers). However, people also prefer friends to behave differently toward the self versus others—and differently toward different others, in line with predictions. For one, people wanted friends to be more prosocial toward them than toward others (e.g., strangers). (A first supplemental study, reported in full in the Supplementary Material, explored a predicted boundary condition for other-directed prosociality preferences: When targets of friends' behavior are described as possible friend poachers—people who would poach participants' best friends—other-directed prosociality preferences are damped.) That people want ideal same-sex best friends to be more prosocial toward them than toward others makes some sense, as one function of friends—and perhaps particularly best friends—may be to provide preferential support ([DeScioli & Kurzban, 2009](#); [Tooby & Cosmides, 1996](#)).

As expected, we also see a comparatively exaggerated version of this effect when comparing preferences for friends' behavior toward oneself versus one's enemy: People want friends who are much more prosocial toward oneself than toward one's enemy and who are much more vicious toward one's enemy than toward oneself. Indeed, people sometimes prefer friends to be more vicious and indifferent than kind or trustworthy toward one's enemies. (A second supplemental study, also reported in full in the Supplementary Material, tested whether people might simply prefer friends who are vicious to targets described as

"enemies," and who might thus be perceived as being, for example, immoral or mean. This was not the case.)

Overall, this work suggests that people's friend preferences are richer and more nuanced than previously thought. When we limit friend behavior to within the friend dyad, then people prefer friends who are kind and disfavor viciousness. But looking beyond the dyad reveals that people prefer friends who behave differently toward the self versus others—differently toward different others in systematically predictable ways. Specifically, people seem to prefer friends to behave in ways that maximize the friendship benefits one receives both via direct behavior (how friends behave toward oneself) and indirect behavior (how friends behave toward others).

5.1. Implications

Findings are consistent with similar work from the mate preference literature. For example, [Lukaszewski and Roney \(2010\)](#) replicated the finding that, compared to men, (heterosexual) women prefer male mates to be dominant (e.g., [Buss, 1989](#)), but they also revealed nuance in this preference: women prefer men who are dominant *toward other men* but not toward the woman herself or her kin. The present findings are also consistent with other friendship work that similarly implies people prefer friends to act differently toward the self versus others. For example, people expect friends to share with us versus others and to keep our secrets while telling us others'—becoming unhappy when these expectations are violated (e.g., [Argyle & Henderson, 1984](#); [Ayers, Krems, & Aktipis, 2023](#); [Krems et al., 2021](#); [Owens et al., 2000](#); [Rose, 1984](#); [Shaw et al., 2017](#); [Simmons, 2002](#); [Sprecher & Regan, 2002](#)). Somewhat similarly, people disfavor friends who are especially generous *when those friends are more generous toward others than toward us* ([Barakzai & Shaw, 2018](#)) and can view our friends' neutrality in our disputes with others akin friends' active opposition ([Shaw et al., 2017](#)).

These findings also extend the canonical work on what people seek in friends, which understandably focused on the most major dimension of friend preferences—how friends behave toward the self—and findings additionally challenge some of the possible conclusions one might have drawn from this work (e.g., that people always eschew vicious friends). If people wanted friends to treat all others as people want friends to treat oneself, then people would prefer friends who behave with minimal viciousness; but that was not the case. Indeed, findings also seem to challenge predictions derived from cooperative accounts of partner choice, which would have expected people to prefer friends who are maximally kind and minimally vicious (regardless of target).

Insofar as findings counter intuitions that people disfavor vicious friends, they might help to explain some prominent phenomena in the moral domain. For example, this framework might help to explain instances wherein sport fans, voters, and other coalition members accept or even celebrate behavior they would otherwise deem immoral—so long as that behavior is enacted in ways that benefit oneself (e.g., as when my friends' viciousness harms my enemy). As Franklin Roosevelt is believed to have said about Nicaraguan dictator Anastasio Somoza, “[Somoza] may be a son of a bitch, but he's our son of a bitch.” Rather than evidencing irrationality, however, such seemingly hypocritical endorsement of otherwise-criticized behavior when it is enemy-directed may reflect deeply strategic social cognition (Jordan et al., 2017; Kurzban, 2011).

In a related but perhaps broader implication, the fact that target-unspecified friendship preferences closely track self-directed preferences (more than other- or enemy-directed preferences) may suggest that some evaluative concepts are indexed to the self (see also Lieberman, Tooby, & Cosmides, 2007; Lukaszewski & Roney, 2010). For example, when Eric says that Jake is kind, he may more accurately be relating that Jake is kind to *him*—even as to Eric or his audience the evaluation might *feel* like an objective attribute of the target (Jake) to which value is imputed. This hypothetical effect may partially explain, for example, partisan bias in the interpretation of events (Hastorf & Cantril, 1954; Ross, 1995; Vallone, Ross, & Lepper, 1985). Evaluative procedures in organisms, including humans, appear to be adaptations that regulate the cognition, physiology, and behavior of the individual (Jackendoff, 2006; Sznycer, 2022; Tooby, Cosmides, Sell, Lieberman, & Sznycer, 2008). Thus, this hypothetical effect may be a *feature* of value computation and not a bug. When communicated, such implicit first-person evaluative defaults could influence the social and moral landscape in the focal individual's favor, as, for example, by convincing audiences that the morally desirable lay of the land is exactly how one describes it to be (Tooby & Cosmides, 2010).

5.2. Limitations and future directions

Predictions largely held across studies, designs, and samples. Notably, however, Indian participants did not prefer friends' viciousness over prosociality toward enemies. The range of responding for this sample was smaller than for U.S. participants (between 3 and 6 versus between 1 and 7 on a 7-point scale), and so it is possible that we were unable to detect genuine effects. Another possibility is this effect is absent in India, perhaps owing to cultural or ecological differences. Ecology is known to influence partner preferences (e.g., Gangestad & Buss, 1993; Schug, Yuki, & Maddux, 2010). Future work should systematically explore ecological differences in target-directed friend preferences.

We discuss friends, broadly, but specifically examined preferences for ideal same-sex best friends. Sex/Gender segregation in friendship is typical from early age and prevalent across cultures (David-Barrett et al., 2015; Kon & Losenkov, 1978). But to the extent that same- and other-sex friends help individuals solve slightly different adaptive problems (Lewis et al., 2011; Lewis, Al-Shawaf, Conroy-Beam, Asao, & Buss, 2012; Williams et al., 2022), then we might expect some differences in friend preferences for same- and other-sex friends. It also remains possible that there is something special about *best* versus close or 'mere' friends. Future work should explore a broader set of friend preferences with respect to the wider category of friend. We would expect to see similar patterns of results, but perhaps with best-friend preferences reflecting higher standards of preferential treatment and loyalty than mere friends.

Future work might also investigate why we did not see *maximal* antisociality preferred toward enemies. That is, if an ideal best friend is

someone who showers maximum net benefits on the self, one might expect people to prefer maximum levels of positive (and minimum levels of negative) traits with respect to themselves, and the reverse pattern with respect to their enemies. But the observed pattern was not so extreme. Why? Perceptions and reputation may help explain these attenuations. Indeed, one can easily imagine situations wherein being the close associate of someone with a reputation for viciousness could preclude one from forming other beneficial alliances. The benefit of preferring a friend who would be willing to, for example, kill one's enemy for an offensive remark needs to be tempered by the reputational cost of being seen as callous—or worse—by association (see Neuberg, Smith, Hoffman, & Russell, 1994; Sznycer et al., 2016), as the total effects that the self derives from a given friend is but one item in the total payoff that the self accrues in the game of life. Additional factors may further explain these attenuations. For example, the presumption of self-interest—the mutual expectation that friends will put more weight on their own welfare than on one's welfare—can militate against expecting a friend to be maximally kind to oneself. Understanding the indirect benefits *and* costs of friends' reputations and behavior—toward us and various others—would provide foundations for making further predictions. Likewise, more work is needed to determine how people might aptly navigate the tradeoffs of enjoying the possible benefits of both selectively vicious and, say, indiscriminately kind friends while also mitigating the possible costs.

Finally, it is an open question as to when this integration of self- and other-directed behavior comes online in development. It is also an open question as to whether there is a critical age by which infants or children become aware of the possible effects that their allies' behavior toward others can have effects on them, thus potentially influencing how those infants or children would prefer their friends to behave toward other people, and whether such preferences might become updated as, say, ecological circumstances shift.

5.3. Conclusion

This work suggests that friend preference research has richly detailed how people want friends to behave *toward oneself*. But one's friends inevitably interact with other people—and these friend-other interactions can affect oneself—as when a trustworthy friend keeps our enemy's secret plan to harm us. Indeed, people are affected by friends both directly (via friends' treatment of oneself) and indirectly (via friends' treatment of others), thus people should possess preferences for how friends behave toward oneself along with distinct, nuanced preferences for how friends behave toward different others. In line with this, whereas we replicate findings that people prefer friends who are more prosocial than not, we also find that people want friends to be more prosocial toward oneself than toward others. In certain instances, people also prefer friends who are more vicious than prosocial—when that monstrosity is directed toward one's own enemies. In all, findings extend the research on and challenge intuitions about what people do (and do not) want in friends.

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Declaration of Competing Interest

None.

Appendix A. (also on OSF)

Prompts

Unspecified Condition

How much would each item below describe your IDEAL SAME-SEX BEST FRIEND’S behavior?

1	2	3	4	5	6	7
(Not descriptive of my ideal best friend’s behavior)						(Very descriptive of my ideal best friend’s behavior)

Self Condition

Compared to the average [participant sex]—a [participant sex] stranger—how would your IDEAL SAME-SEX BEST FRIEND behave TOWARD YOU. My ideal best friend would be _____ to me?

1	2	3	4	5	6	7
(Less ___ to me than the average [participant sex])			(Similarly ___ to me as the average [participant sex])			(More ___ to me than the average [participant sex])

Stranger Condition

Compared to the average [participant sex]—a [participant sex] stranger—how would your IDEAL SAME-SEX BEST FRIEND behave TOWARD OTHER [participant sex] strangers.

My ideal best friend would be _____ to [participant sex]?

1	2	3	4	5	6	7
(Less ___ to other [participant sex] than the average person)			(Similarly ___ to other [participant sex] than the average person)			(More ___ to other [participant sex] than the average person)

Enemy Condition

Compared to the average [participant sex], how would your IDEAL SAME-SEX BEST FRIEND behave TOWARD YOUR [participant sex] ENEMY or RIVAL (a [participant sex] who is competitive with you, mean to you, or would be happy to see you fail).

My ideal best friend would be _____ my enemy?

1	2	3	4	5	6	7
(Less ___ to my enemy than the average [participant sex])			(similarly ___ to my enemy as the average [participant sex])			(More ___ to my enemy than the average [participant sex])

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