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Psychological Selfishness

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Abstract

Selfishness is central to many theories of human morality, yet its psychological nature remains largely overlooked. Psychologists often draw on classical conceptions of selfishness from evolutionary biology (i.e., selfish gene theory), economics (i.e., rational self-interest), and philosophy (i.e., psychological egoism), but such characterizations offer limited insight into the psychology of selfishness. To address this gap, we propose a novel framework in which selfishness is recast as a psychological construction. From this view, selfishness is perceived in ourselves and others when we detect a situation-specific desire to benefit the self that disregards others' desires and prevailing social expectations for the situation. We argue that detecting and deterring such psychological selfishness in both oneself and others is crucial in social life—facilitating the maintenance of social cohesion and close relationships. In addition, we show how using this psychological framework offers a richer understanding of the nature of human social behavior. Delineating a psychological construct of selfishness can promote coherence in interdisciplinary research on selfishness and provide insights for interventions to prevent or remediate the negative effects of selfishness.

Keywords

selfishness, motivation, morality, expectations, emotion

What is the role of selfishness in human life? This question seems crucial for both our understanding of human morality and human nature more broadly. But despite its importance, the psychological nature of selfishness has received surprisingly little attention. A major challenge in investigating the psychology of selfishness has been pinning down the concept itself. Selfishness remains a decidedly ambiguous concept in our field, referring to a wide range of phenomena. Some researchers invoke the term to describe any behavior that yields a conceivable self-benefit (e.g., buying consumer goods), whereas others tend to equate selfishness with any behavior that reflects a lack of generosity, cooperation, or altruism (e.g., failing to give to charity).[1] Recent reviews have attempted to accommodate such discrepant uses, allowing selfishness to encompass phenomena as diverse as narcissistic personality traits, dispositional greed, and egoistic reasons for helping (Crocker et al., 2017; Diebels et al., 2018). However, given the prominence of selfishness as a scientific term and its importance for understanding human morality and human nature more broadly, we believe our field is overdue for a psychological theory of selfishness.

In this article, we propose an account of psychological selfishness. We begin by briefly reviewing concepts of selfishness from the social and natural sciences that are commonly adopted by psychologists (e.g., selfish genes and psychological egoism). We show how these views of selfishness are often not intended to—and consequently fail to—distinguish selfishness as a *psychological state* from other, nonselfish psychological states. Moreover, we show how these views depart from people's intuitions about selfishness in human life. We next propose a theoretical model of selfishness through which we aim to address the psychological limits of existing views. Drawing on constructionist models of emotion (see Barrett, 2014), we propose a framework in which selfishness is cast as a psychological construction that people apply to their own and others' desires in certain contexts. Specifically, we propose that we classify ourselves and others as selfish in a situation when we detect a desire to benefit oneself that disregards others' desires

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and prevailing social expectations. We then outline the social and cognitive processes that we propose underlie the detection of such desires in others and in oneself. Last, we highlight potential biases in detecting such psychological selfishness, as well as the cascade of emotional outcomes (e.g., guilt within the selfish agent and anger within others) and social consequences (e.g., censure and punishment by others) that tend to follow its detection. This framework recasts selfishness as a psychological construct that can be clearly manipulated and measured, the antecedents and consequences of which may be systematically studied. In turn, this framework can afford us a deeper understanding of the psychological nature of selfishness.

Current Models of Selfishness

Psychologists tend to draw on views of selfishness from at least three distinct fields: evolutionary biology (e.g., selfish genes), economics (e.g., rational self-interest), and philosophy (e.g., psychological egoism). Here, we focus on one conception of selfishness within each field to illustrate the diversity of views on selfishness, although we note that the boundaries between these concepts are not always clear. We highlight three concepts in particular that have had an important influence on psychological debates about human altruism and morality (Batson, 2011; Miller, 1999; Rachlin, 2002; Wallach & Wallach, 1983). Other perspectives on selfishness exist—including views that frame selfishness in terms of its relationship to personal identity (e.g., Bartels & Urminsky, 2011; Frimer et al., 2014), self-control (Rachlin, 2002), psychopathy (Sonne & Gash, 2018), and ethics (Dubois et al., 2015; Lu et al., 2018)—but many of these views ultimately draw on—or are related to—at least one of the three key conceptions of selfishness we review here.

Evolutionary selfishness

> We are survival machines—robot vehicles blindly programmed to preserve the selfish molecules known as genes. (Dawkins, 1976, p. vii)

Selfishness as selfish genes. Since the publication of *The Selfish Gene* (Dawkins, 1976), selfishness has been a key concept in evolutionary biology (Bird, 2020; Gardner & Welch, 2011; Goddard & Burt, 1999; Orgel & Crick, 1980). Within the field, "selfish" refers to gene variants (alleles) whose phenotypic effects increase an organism's *fitness*, or its ability to survive and reproduce. Such genetic selfishness applies to all organisms and unfolds irrespective of whether the organism has a mind. For instance, if an oak tree possessed an allele that triggered it to grow more leaves than other saplings in its grove—and thus absorb more sunlight—a biologist might suggest this oak tree is selfish (Dawkins, 1981). In psychology, this conception of selfishness has been especially popular among evolutionary psychologists for making sense of human reasoning, behavior, and emotion (e.g., Buck, 1999; Buss, 2005).

Limitations of selfishness as selfish genes. For psychologists, an obvious limitation of this conception of selfishness is that it refers to a quality of genes. People typically do not view others as selfish for possessing fitness-enhancing genes (e.g., alleles that cause a more efficient metabolism) or for engaging in behaviors that have fitness-enhancing effects (e.g., good parenting). Indeed, in human life, the acts people view as selfish (e.g., eating a friend's lunch from a communal fridge) are rarely if ever aimed at propagating the actor's genes (Nesse, 2006). These discrepancies emerge because, as other theorists have noted (Crawford & Krebs, 2012), fitness effects are largely irrelevant for psychological selfishness—which instead centers on the *motives* behind an action.

It can nonetheless be tempting to infer that metaphorically selfish genes directly give rise to the selfish motives (Ghiselin, 2009). Indeed, both laypeople (Brem et al., 2003) and at least some scholars (e.g., Case et al., 2000; Midgley, 1979) have misread selfish gene theory as implying that human motives are selfish—despite efforts to clarify the scope of the theory (Brewer & Caporael, 1990; Crawford & Krebs, 2012; Dawkins, 1981; Sober, 1994; Wilson, 1992).

Selfish gene theory is a useful and generative framework when applied within evolutionary biology, but it is neither intended nor equipped to inform the psychology of selfishness. Indeed, Dawkins does not claim we are "born selfish" in a psychological sense (Dawkins, 1981). This is important to emphasize because evolutionary views of selfishness continue to be adopted in psychology, and the conceptual boundaries of such views are sometimes left unclear, or undefined.

Economic selfishness

> It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest. (Smith, 1776/2007, p. 17)

Selfishness as self-interested behavior. Historically, classical economists such as Adam Smith and neoclassical economists who followed Smith assumed that the chief motive underlying all economic behavior was maximizing personal utility, or *self-interest* (Becker, 1981; Caporael

et al., 1989; Mansbridge, 1990; D. T. Miller, 1999). However, as noted by Simon (1993), most early theorists postulated nothing about what humans might value outside of the marketplace, and thus they equated maximizing self-interest with maximizing economic rewards (e.g., money or goods).[2]

More recently, behavioral economists have proposed views of human preferences that extend beyond the marketplace and consider the value humans place on the welfare of other people (Charness & Rabin, 2002; Fehr & Fischbacher, 2004; Henrich et al., 2001; Ruff & Fehr, 2014). Although economic views of human preferences have grown, the concept of selfishness used within behavioral economics has itself remained relatively static. In empirical contexts, selfishness (or self-interested behavior) often refers to any behavior that reflects neoclassical assumptions—that is, behavior that maximizes one's own economic rewards.[3] In particular, selfishness is typically defined by people's behavior within economic games (Andreoni & Miller, 2002; Eckel & Grossman, 1998; Engel, 2011; Klein & Epley, 2014; Konow, 2000). One canonical paradigm adopted by psychologists is the dictator game (Forsythe et al., 1994), in which a "dictator" participant is given complete power over to how to split a pot of money with an anonymous recipient.

The key variable for classifying people as selfish within dictator games is how much (or how little) they choose to benefit themselves, as opposed to others, in the game (e.g., Cason & Mui, 1997; Hein et al., 2016; Singer et al., 2008; Sul et al., 2015; Vuolevi & Van Lange, 2010). This usage of the term "selfish" is strictly behavioral because the aim of behavioral economic models is to explain patterns of behavior rather than psychological processes.

Limitations of selfishness as self-interested behavior. For psychologists, conceptualizing selfishness as behavior that benefits oneself as opposed to others has several key limitations. Most notably, this definition lacks context sensitivity. In many contexts, benefiting ourselves over others does not necessarily imply a psychological form of selfishness (Eisenberg & Miller, 1990). For example, it would be strange to describe routine activities such as reading a book or drinking coffee as selfish, although they benefit oneself far more than they benefit others.

One could specify that selfishness involves choosing to benefit oneself when faced with an *opportunity* to benefit others (e.g., Berman & Small, 2012). However, several factors still weaken the link between selfish behavior in dictator games and underlying selfish motives.

First, people can vary in their *subjective beliefs* about what counts as a selfish allocation of money in dictator games depending on the situation (Carlson et al., 2020; Croson & Gneezy, 2009; Dickinson & Tiefenthaler, 2002; Konow, 2000). To illustrate, few people would perceive someone as selfish for not giving a cut of their paycheck to a stranger, yet when dictator games use money a participant earned, rather than money endowed by experimenters, the resulting decline in giving behavior is still described as an increase in pure self-interest (Cherry et al., 2002; Oxoby & Spraggon, 2008). This illustrates another way in which selfishness, as defined by overt economic behavior, appears to be at odds with a psychological form of selfishness. Thus, even when an opportunity exists to benefit others, people may often not see themselves or others as selfish for not helping.

Second, the mapping between motives and behavior is not always clear. Psychologists might be tempted to interpret a decision to keep money in a dictator game as reflecting the selfish desire to accrue economic rewards. However, people use money to achieve many ends (Aknin et al., 2018), and people report numerous motives for saving money, including supporting their families and giving to preferred charities (Srivastava et al., 2001). Thus, people who keep a higher amount of money in a dictator game may, in some cases, possess a comparable degree of prosocial motivation as those who give more money away in the game. This means that behaviors labeled selfish within behavioral economics, or patterns of brain activation linked to such behaviors within neuroeconomics, do not necessarily reflect selfish motives.

Economic games certainly have some benefits, even for psychologists. They provide a simple and efficient means for quantifying social behavior.[4] However, such methods are now so common within psychology that there is a risk of psychologists equating psychological selfishness with behavioral economic measures of self-interest. Thus, although these measures can be useful as a behavioral correlate of psychological selfishness, they should not be assumed to faithfully reflect underlying selfish motives. Indeed, the rich suite of mental states that people experience often do not neatly align with the choices offered in artificial experiments, and this is particularly important when considering the psychology of selfishness.

Philosophical selfishness

> For no man giveth, but with intention of good to himself; because gift is voluntary, and of all voluntary acts, the object is to every man his own good. (Hobbes, 1651/1973, p. 75)

Selfishness as egoistically motivated prosociality. Philosophers have long viewed selfishness through the lens of *psychological egoism* (Hobbes, 1651/1973; Mandeville,

1714/1970)—the theory that all human actions, including seemingly selfless acts, are ultimately motivated by self-interest. Although psychological egoism is in some ways similar to the economic conception of selfishness, it can be distinguished by the universality of its claim. For instance, psychological egoism implies that people in dictator games are selfishly motivated irrespective of how they distribute their money. This is because there are self-benefits either way: We benefit our economic self-interest by keeping money, and we benefit our moral status by giving it away.

Psychological egoism has shaped a number of prominent traditions within psychology over the past century, including psychoanalysis (Freud, 1955; Wallach & Wallach, 1983) and behaviorism (Slote, 1964). However, the theory has perhaps received the most attention among social psychologists studying altruism and prosocial behavior (Batson & Shaw, 1991; Cialdini, 1991; Dovidio, 1991; Schroeder et al., 1988). For such researchers, a selfish (or egoistic) motive typically refers to any motive that is ultimately aimed at benefiting oneself (Cialdini, 1991), whereas an altruistic motive typically refers to any motive that is ultimately aimed at benefiting others (Batson & Shaw, 1991).

A major goal of social psychologists adopting such terms has been to test the core tenet of psychological egoism—that all actions, including seemingly altruistic acts, are ultimately selfishly motivated. To this end, researchers primarily have tested whether actions intended to benefit others—*prosocial behaviors*—can ever be altruistically motivated (Andreoni, 1990; Batson, 2011; Batson & Shaw, 1991; Cialdini, 1991; Cialdini et al., 1987; Eisenberg & Miller, 1987; Rempel et al., 1985). It remains common among researchers familiar with this scholarly tradition to use the term "selfish" to refer to *egoistically motivated prosociality*—that is, any motive for prosocial behavior that is not strictly altruistic (see Barasch et al., 2014; Carlson & Zaki, 2018; Kraft-Todd et al., 2020; Miller & Ratner, 1998).

Limitations of selfishness as egoistically motivated prosociality. For psychologists, a key limitation of this view of selfishness is its roots in psychological egoism—which has faced criticisms on many fronts. Critics have long argued that some forms of egoism are tautological (Nagel, 1978; Shaver, 2002) because they imply that we ultimately desire the satisfaction of our own desires. Others have criticized psychological egoism for presuming that certain motives, such as the motive to avoid feelings of guilt or to be liked and approved of by others, are strictly egoistic. Such critics hold that these motives should be reclassified as *relational* (Sober & Wilson, 1999, p. 224) or viewed as part egoistic and part altruistic (J. Feinberg, 2012). Furthermore, psychologists have noted that the boundaries between selfishness and nonselfishness are poorly defined in psychological egoism (Benesh & Weiner, 1982, p. 121; Brown, 1986, p. 890).

The scope of this theory is, for our purposes, its most crucial limitation. Psychological egoism fails to meaningfully distinguish selfish motives and behaviors from any other type of motive or behavior because the view claims that all motives are selfish. Thus, although this model might be interesting when applied to cases of apparent altruism (Cialdini, 1991), in most other cases its claims are trivial. For instance, according to this model, the desire to eat breakfast is selfish.

This view, much like the others reviewed above, is clearly disconnected from how selfishness is viewed in everyday life. People do not judge routine behaviors (e.g., buying food, doing laundry, or watching a film) as selfish (Carlson & Zaki, 2018). More importantly, in contrast to psychological egoism, people tend to believe that humans can be, and frequently are, altruistically motivated (Carlson & Zaki, 2021; Gebauer et al., 2015). Finally, as suggested earlier, some motives that researchers explicitly highlight as selfish, such as helping others out of a desire to enhance one's own emotional well-being (Cialdini & Kenrick, 1976), seem to be perceived as consistent with altruism (Barasch et al., 2014; Carlson & Zaki, 2018).

Taken together, these findings suggest that psychological egoism and its associated concept of selfishness are out of touch with social reality because the claims of this theory capture neither a clear conception of psychological selfishness nor one that reliably aligns with how selfishness actually is perceived by people.

Summary of current models of selfishness

The views of selfishness reviewed above have made vital contributions to psychological science—both as motivating forces for empirical work (e.g., Batson, 2011) and as sources of theoretical insight (e.g., Jara-Ettinger et al., 2016). However, when assessed as candidates for a psychological model of selfishness, we believe existing views share at least two key shortcomings.

First, these accounts do not offer a principled way to distinguish psychological motives that might be viewed as selfish (e.g., desiring to eat a stranger's breakfast) from those that are not (e.g., desiring to eat your own breakfast). Second, these accounts are misaligned with how selfishness is actually perceived by people. In particular, compared with ordinary usage, many existing models seem to overstate the prevalence of selfishness in human life (Carlson & Zaki, 2018). To address these shortcomings, we specify psychological criteria for selfishness in the proposed framework and align the concept of selfishness with social realities.

A Psychological Framework for Selfishness

We begin by highlighting two key foundations of our psychological model of selfishness. First, following similar proposals for emotion concepts (Barrett, 2009; Russell, 2003), we hold that selfishness is best understood as a psychological construction. That is, psychological selfishness does not directly correspond to specific types of motivation (e.g., hunger) in isolation. Instead, it emerges when people ascribe meaning to their own or other peoples' motives within a specific social situation. Thus, psychological selfishness is a *perceptual act* because it is not a real structure in the natural world but something that we detect in ourselves and others.

Second, as indicated above, we hold that psychological selfishness is best understood as a concept that is aligned with how humans commonly use the term in social life. One common dictionary definition of selfishness is "the quality or state of being selfish : a concern for one's own welfare or advantage at the expense of or in disregard of others : excessive interest in oneself" (Merriam-Webster, n.d.)

What is the advantage of embracing the common usage of the term for building a psychological theory of selfishness? Although this approach is not always warranted (e.g., for memory concepts), we believe it is deeply insightful for examining a psychologically constructed phenomenon such as selfishness. For one, as noted by Bruner (1990), intuitive theories ultimately create the perceptual boundaries of psychological phenomena. That is, the motives and actions that people deem to be selfish, versus not selfish, are in part what define the phenomenon of selfishness. In addition, intuitive views ultimately guide the actions and emotional outcomes of perceivers (Crosby, 1976; Krebs, 1970). That is, intuitive views of selfishness will dictate whether an action will be met by onlookers with indifference, or with resentment—and whether the actor will themselves feel guilty or not about their action.

At least a few psychologists adopt definitions of selfishness that align with intuitive theories—that is, as a desire to benefit oneself at the expense of others (De Dreu, 2004; Diebels et al., 2018; Krebs, 2011; Stebbins, 1981). Here, we build on their work. Specifically, we propose that embedded in such definitions—explicitly or implicitly—are four core components of psychological selfishness: *situations, desires, minds*, and *expectations*. Together, these components form the preconditions for the detection of selfishness in human life.

In what follows, we define each of these four components of selfishness and illustrate why each is necessary for detecting selfishness. Further, we highlight how issues with prior conceptions of selfishness are resolved by specifying each of these four components.

Situations

One challenge in defining selfishness is identifying the situations in which it unfolds. Without constraining the space, time, people, and possible actions that are relevant to a situation, it can be difficult to delineate which actions will be perceived as selfish and which ones will not be. William James alluded to this issue when he wrote, "An act has no ethical quality whatever unless it be chosen out of several all equally possible" (James, 1879, p. 13). This insight is important when considering how action possibilities factor into selfishness because people can perceive situations differently. An observer might refer to someone who buys a $5 latte as selfish, highlighting that they could have donated that money to charity. However, if giving to charity was not perceived as a situationally salient action possibility by the actor, that actor certainly would not agree that their action was selfish. Indeed, perceptions of selfishness arise when we perceive an action or motive to deviate from neutral, alternative possible actions or motives for the situation.

For this reason, and in keeping with a long tradition in psychology (Lewin, 1935; Mischel, 1973), it is important to position selfishness as a state that occurs within a specific situation. Situations consist of the features (e.g., people, action possibilities, and objects of desire) that are seen as relevant to a perceiver's current experience. The situation also defines the perceived spatial and temporal boundaries that constrain these features, that is, the relevant time frame (e.g., the duration of time spent with a friend) and social space (e.g., the restaurant at which one meets and dines with a friend). Perceivers can detect such selfishness in situations even if the actor, or supposed victim, is not physically present, or if the situation is imagined. This conception of situations takes inspiration from related, classic concepts in social psychology (i.e., situations; Lewin, 1943), sociology (i.e., stages; Goffman, 1959), and artificial intelligence (i.e., scenes; Schank & Abelson, 1977). Although we emphasize states over traits in this view, a person who repeatedly exhibits such "state" selfishness across situations could be perceived as exhibiting dispositional (or trait) selfishness (Jones & Davis, 1965; Kelley, 1973). Such actors might tend to routinely disregard social expectations and the interests of others while pursuing their desires and consequently be seen by others as a selfish person—but not necessarily perceive themselves as such.

Another crucial part of a situation is the perceived presence of others—that is, real or imagined people who

are perceived to be situationally relevant to, or affected by, the action. In line with Mason and Shan (2017), we view social behavior as behavior that is influenced by the perceived presence of other people. From this perspective, devouring one's own pint of ice cream while alone at home would be viewed as nonsocial and thus would not be seen as selfish. By contrast, devouring a roommate's pint of ice cream likely would be.

Whereas many psychological phenomena might be fruitfully constrained by considering the situation, two situational features that are key to perceiving psychological selfishness are the perceived presence of alternative courses of action and the perceived presence of others. To illustrate, imagine the following situation. Joe is at a small office party. A large chocolate cake is served. Those around the cake, including Joe, each take a slice. Afterward, one piece of cake remains.

From these concrete facts of the situation alone, one can discern little about selfishness. Although this situation presents salient action possibilities (i.e., to take the last piece of cake or to not take the last piece of cake), more is needed for a typical inference of selfishness. Indeed, situations are crucial because they set the stage for three other key elements of selfishness—they elicit desires, allow minds to interact, and generate expectations.

Desires

We suggested above that self-interested behavior does not always imply selfish motives. For instance, a single parent might politely reject a canvasser's charity appeal not from a desire to accrue wealth but to ensure they can afford groceries for their family. The inverse is also true: Selfish motives need not imply self-interested behavior. For instance, a banker might feel a momentary urge to not tip a caterer strictly to hoard their wealth but eventually tip anyway. These issues are reconciled by discarding the behavioral requirement of selfishness and instead conceiving of psychological selfishness as, at its core, a perceived desire.[5]

The proposal that we perceive selfishness from desires in the absence of any behavior is consistent with prior work from moral psychology (Cushman, 2008, 2015; Inbar et al., 2012). For instance, people believe it is morally wrong to desire to harm others (e.g., for someone to want to burn a partner's hand) even if no harm ultimately comes from their desire (Cushman, 2008). Moreover, people similarly morally condemn those who wish to profit from harm inflicted on others, even if the events are uncontrollable (e.g., a fund manager hoping for a natural disaster to profit on an investment; Inbar et al., 2012). However, prior work also suggests that second-order desires (or metadesires) can shape moral judgments about desires. For instance, agents who have an impulsive desire (e.g., drug craving) but wish they did not have such an impulsive desire (e.g., wish they were not addicted to drugs) are viewed as more moral than those who just have an impulse or formed their desire via careful deliberation (Pizarro et al., 2003). This suggests, for instance, that someone who expresses a selfish desire but also expresses that they wish they did not have such a desire would be evaluated more positively than if they expressed no such wish.

Although few studies have focused on perceptions of selfishness directly, those that have similarly suggest that perceptions of selfishness are sensitive to mental states—even when behavior is held constant. For instance, during salary negotiations, people view negotiators as more selfish simply for expressing anger while they signal that an offer is too low ("Your offer really pisses me off . . . it's too low. This is an annoying way to start" vs. "Your offer is too low"; Yip & Schweinsberg, 2016)—which is consistent with the agent holding a stronger desire to earn money. Likewise, when a partner chooses to assign a participant to a tedious task, they are rated as selfish, even if it is subsequently learned that the partner's choice had no impact on the ultimate outcome (Allen & Leary, 2010). Moreover, simply reframing the rejection of an unfair offer in the ultimatum game as "wanting to get more money than $0" is seen as more selfish than "rejecting an offer of $7" (Larrick & Blount, 1997).

Thus, we propose that psychological selfishness requires detecting, in ourselves or another person, a desire to act (e.g., to perceive that a friend desires to take the last piece of cake). That is, an individual must perceive a motivational state in oneself or others that is directed toward a situation-specific want or need (Heider, 1958; Lewin, 1938). Several implications of desires are worth highlighting. First, desires are distinct from actions—such that they can long precede actions. Second, desires are dynamic—such that the strength of a desire may change from moment to moment as one recognizes and reacts to its presence, as well as other aspects of the situation. Thus, one desire may momentarily fade (e.g., the desire to withhold a tip) in favor of another (i.e., the desire to be polite).

We propose that selfishness involves a desired action that would obtain or maintain a situation-specific benefit for the actor. This might include wanting to take an extra-large slice of cake at a party, wanting to cut in line at the grocery store, or wanting to occupy multiple seats with one's personal items on a crowded bus. Crucially, in each of these examples, the desired action would achieve a common and shared human desire (i.e., to consume sweets, to save time, and to feel comfortable). That is, selfish desires themselves would be

acceptable in the situation if not for the fact that other people were negatively affected by their pursuit in the current instance. Thus, these desires can be directed toward basic rewards, such as food, but also secondary rewards, such as money, time, or knowledge.[6]

As mentioned above, perceiving a situation-specific desire is necessary for detecting selfishness. For instance, one could abstractly desire cake without that desire being directed toward taking the last piece of cake at the current party.

Another implication of our definition of a "desire to act" is that a desire must be of sufficient strength that if an individual had an unobstructed opportunity to pursue the action, that person would act on it. In general, any desire for a shared, limited resource could be a catalyst for selfishness.

People have privileged access to their own desires, and it is not uncommon for people to communicate their desires to others as well. However, in other cases, people indirectly detect the desires of others. How do people accomplish this feat? One strategy is to rely on prior knowledge to anticipate an actor's likely desires given the situation. Another tactic is to discern perceptible cues that betray an individual's desires, such as their gaze, body posture, and where they have positioned themselves in space. Indeed, a rich and growing interdisciplinary literature suggests that people are adept at detecting other peoples' desires under a variety of circumstances (Aarts et al., 2004; Clark, 2011; Davis et al., 2021; Heider, 1958; Jones & Davis, 1965; Kelley, 1967; Morelli et al., 2018; Moskowitz & Olcaysoy Okten, 2016; Reeder & Trafimow, 2005; Zaki, 2020).

We can now incorporate desires into the office-party scenario. A chocolate cake is served at a small office party. Those around the cake, including Joe, each take a slice. Afterward, one piece of cake remains. Joe desires to take the last piece of cake.

Although it might seem probable to some that Joe's desire is selfish, we believe such an intuition relies on two additional, implicit assumptions. As argued above, desires, in isolation, reveal nothing especially noteworthy about a person. Thus, perceiving a situated desire for cake, by itself, will not dependably lead people to perceive selfishness. We hold that such inferences require that the desire additionally disregards the preferences of others and that it conflicts with the prevailing social expectations. These two elements reflect minds and expectations in our model, respectively. We now turn to the former.

Minds

Another component of psychological selfishness is the capacity to detect the minds and desires of others. One must be able to represent other minds and their potential desires and by extension, the effect one's own actions may have on those minds and desires. Thus, we argue that those without this capacity—such as oak trees, starlings, and newly born infants[7]—do not possess the mental machinery to see themselves or others as psychologically selfish.

By contrast, most adults are skilled at considering other people's desires and how their actions can affect them (Frith & Frith, 2012; Zaki, 2020). Leveraging an ability to think about the wants and needs of others is, for instance, crucial in parenthood and close relationships.

Of course, in many cases, one's mind is not occupied with the desires of others, even in a social setting. For instance, while at a wine bar with a friend, one may not consider whether the merlot one wishes to order will also satisfy the desires of the friend. By contrast, if the two had agreed to share a bottle of wine, most people would revise or suppress a personal desire to order merlot for the table if they knew that their friend dislikes this wine.

We can now incorporate minds into the office-party scenario. A cake is served at a small office party. Joe, and others around the cake, each take a slice—leaving one slice left. Joe desires the last piece of cake. Taylor also wants the last piece of cake.

This brings us closer to a common social situation in which perceptions of selfishness arise. Yet we maintain that this scenario still does not fully illuminate the needed elements for perceiving selfishness. Even if Taylor desires to have the last piece of cake, Joe may not be perceived to be selfish for wanting it too. It could be Joe's birthday, which might shift the social expectation in favor of his desires, and those present, accepting this, may believe his desire for the last slice is not selfish.

Indeed, although minds and desires are necessary for perceiving selfishness, they are not sufficient because the expectations within a situation also crucially shape how those minds and desires are perceived.

Expectations

Last, psychological selfishness requires the ability to both represent expectations for a situation and detect discrepancies between expectations and reality. Expectations reflect a predicted state of affairs for a situation on the basis of context-relevant social norms.[8] As such, expectations for social situations might vary from abstract, cultural expectations (e.g., to be generally fair to others) to concrete, dyadic expectations (e.g., to pitch in equally for groceries). It is noteworthy that social expectations guide the types of actions and desires we believe are appropriate for a given situation

(Feldman & Albarracín, 2017; Kahneman & Miller, 1986) and thus provide the alternatives to which we compare selfish actions. Often, one expectation will be most relevant; however, two expectations can clash, or perceivers may hold different expectations for the situation. For instance, with respect to fairness, a perceiver could expect that an appetizer at dinner should be split equally or proportional to input (who paid). But in other cases, another expectation might prevail over those related to fairness, such as expectations surrounding consideration of the needs of others—for instance, if one of the dinner guests is currently between jobs and not financially secure.

The strength of social expectations may also vary. Expectations for a romantic partner's behavior may be fundamentally different from those for a stranger (Clark et al., 2020; Earp et al., 2021). Indeed, perceptions of selfishness can be powerfully shaped by whether the relationship between agents is communal or exchange-based (Clark & Mills, 1979, 1993), as well as by the strength of the communal relationship when one does exist (Mills et al., 2004)—topics we discuss later.

We had previously noted that most people would revise their desire to order a bottle of Merlot if they knew their friend dislikes this wine. This gives rise to a consensus that one's desires should be modified to consider others. We argue that this is a case in which there is an expectation to consider others' desires when thinking about one's own course of action. Expectations govern whether it is appropriate to consider others' desires or not and thus whether selfishness will or will not be perceived.

The role of expectations in psychological selfishness further distinguishes the proposed framework from prior views of selfishness, such as those that draw on self-interested behavior or psychological egoism. As mentioned, even when an agent has an opportunity to share a resource (e.g., Bob's employer offers the option for him to automatically donate a portion of his biweekly paycheck to UNICEF), the agent might not see themselves as selfish for wanting to keep their resources. Note that another agent in this same situation with a stronger personal norm to care for others (i.e., a different salient expectation) might see themselves as selfish for not donating in this case. Psychologists sometimes label the broader phenomenon of maximizing one's own outcomes relative to others, independent of expectations, *individualism* (Kelley et al., 2003; Messick & McClintock, 1968; Van Lange, 1999). However, we hold that only a subset of such phenomena—those that violate some salient or prevailing expectation—actually tend to be viewed by people as selfish.

Adding expectations to our scenario completes the picture (see Fig. 1). A cake is served at a small office party. Joe, and others around the cake, each take a slice—leaving one slice remaining. Joe wants to take the last piece of cake, but Taylor wants to take it as well. Taylor has not had a piece yet and expects to have one.

With the addition of these social expectations, it seems clearly selfish to want to take the last piece of cake at a party when others have not yet had a piece, want to have one, and should expect to have one on the basis of the situation. Thus, unless Joe had a biased perception of the situation, his desires, other minds, or the expectations (a topic examined ahead), we predict that he would view his desire to take the last piece of cake as selfish. In addition, if he signaled evidence of his desire to others, either indirectly (e.g., through his gaze) or directly (e.g., by expressing it to Taylor or by putting the last piece of cake on his plate), we predict that others would likely also view his desire as selfish. Thus, this scenario now qualifies as a case in which psychological selfishness is likely to be detected.

Integrating the components

We built on insights from a long history of psychological theorizing (e.g., Clark & Mills, 1979; Lewin, 1935; Mischel, 1973) above to propose four necessary ingredients for detecting psychological selfishness. Putting these four components together, we can define psychological selfishness as a situated desire to act in a way that benefits oneself and violates a prevailing social expectation, such that it disregards the desires of others in the situation. Crucially, such psychological selfishness is detected in ourselves and others through a process of psychological construction. Consequently, detecting psychological selfishness will depend on a perceiver's representation of each of the four components outlined above. In turn, this suggests that the same desire can be viewed as selfish or unselfish depending on how a perceiver represents (or misrepresents) the situation, as well as the relevant desires, minds, and expectations within it.

We believe this definition has many key implications for the way we think about selfishness. Moreover, it highlights a range of topics that can be explored in future work. Although we tested our framework against one situation above, we illustrate in Table 1 how it captures selfishness across many different social scenarios.

As we argued above, one key feature of this conception of selfishness is that it is consistent with how people perceive selfishness in social life. Whereas some scientists already use the term colloquially in this way (e.g., C. Anderson et al., 2020), the components of selfishness outlined above are typically left implicit in such usage.

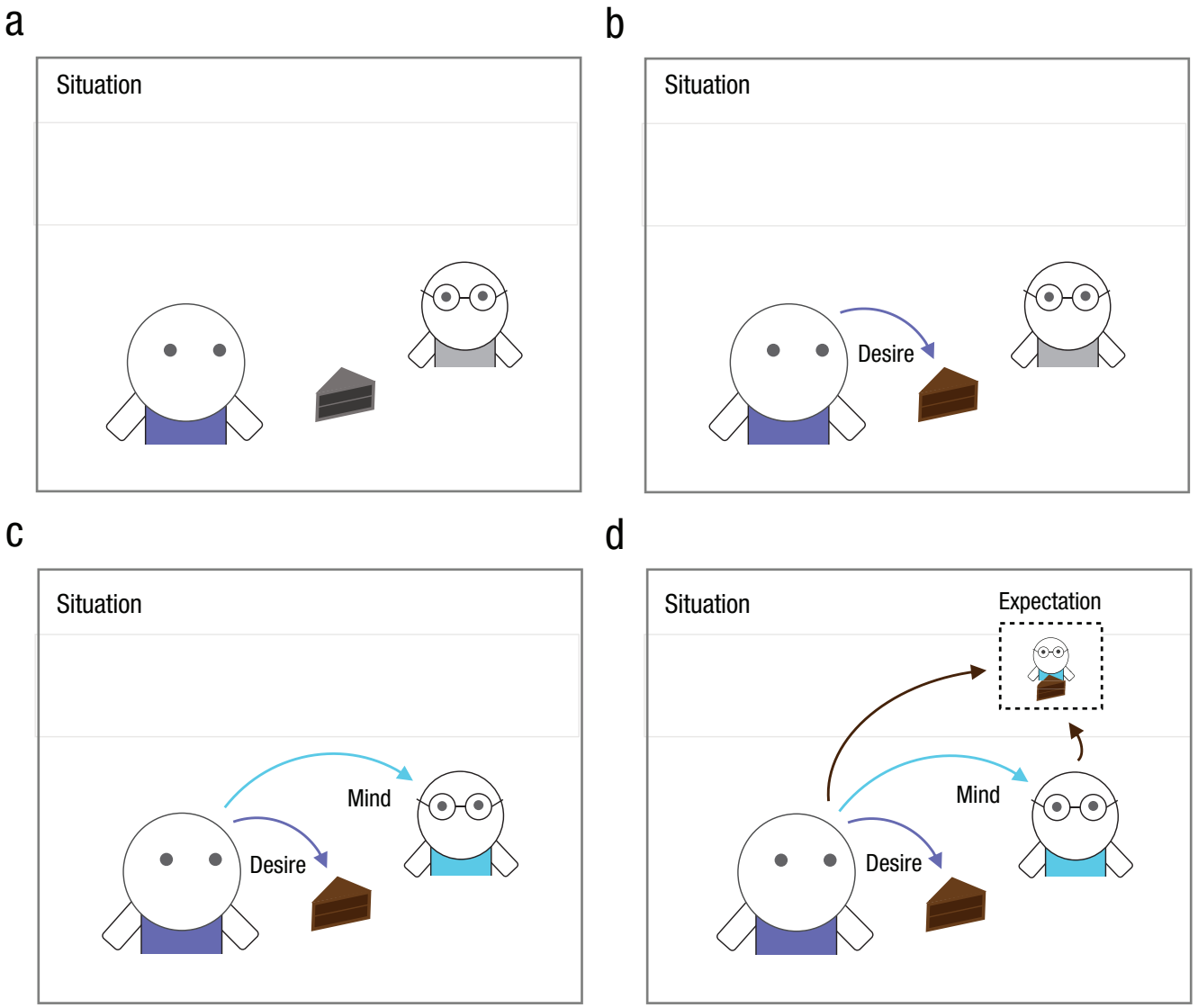

Fig. 1. A minimal example of the proposed psychological framework for detecting selfishness, which shows how the four components give rise to an inference of selfishness. Selfishness is detected in social situations (a) in which situation-specific desires to benefit oneself lead to (b) disregarding other minds and their desires (c) and violate prevailing expectations for the situation (d). Although the components are illustrated in this order, they need not occur in this order.

Psychological selfishness is conceptually related to, but distinct from, several other concepts in the psychological literature such as greed and narcissism (for distinctions, see Table 2).

By highlighting four key components of psychological selfishness, and distinguishing this concept from related concepts, we believe this work offers a path toward a more conceptually precise science of selfishness.

Another useful aspect of this framework is that it highlights likely precursors to selfishness. For instance, it predicts that selfishness is likely to occur when human desires are at odds with those that are anticipated because of the desires and expectations of others.

Benefits of Detecting Psychological Selfishness

How might the detection of selfishness in others, and in ourselves, be beneficial in human life? In this section, we outline some key benefits of detecting psychological selfishness in others—and especially close relationship partners—as well as detecting it in ourselves. In doing so, we highlight how the utility of detecting psychological selfishness, as defined here, extends beyond that of detecting selfish genes, self-interested behavior, or egoistically motivated prosociality.

We propose that detecting selfishness in others carries at least three crucial benefits for perceivers. First,

Table 1. Six Illustrations of Psychological Selfishness

Type of detection	Social situation	One's own desire	Another mind's disregarded desire	Violated expectation
Social detection	A stranger cuts in front of you at the grocery store	To save time	You do not want to wait longer	To wait in line on a first-come, first-served basis
	A friend will not share an umbrella during a rainstorm	To avoid being wet	You want to avoid being wet too	To share one's umbrella with friends during a storm
	A housemate uses all the hot water during a long shower	To be warm	You want to be warm too	To save hot water for one's housemates
Self-detection	You eat your housemate's tub of ice cream	To eat ice cream	Housemate wants to eat their ice cream too	To respect other people's personal goods
	You eat more than your share of a shared plate of yam fries	To consume fries	To get their fair share of the meal	To consume an amount that is proportional to payment
	You park in a parking spot reserved for someone else	To save time	Others want convenience	To abide by established parking rules

it promotes *self-protection*. That is, it can help us detect and prevent potential exploitation and unfair treatment by those engaging in selfishness. Second, it promotes *group coordination*. That is, it can bolster coordination and cooperation among groups by informing groups about which members pose a threat to group goals. Third, it enables *moral signaling*. That is, pointing out selfishness in others can allow us to signal our own moral status by censuring or punishing selfish actors.

Such benefits are crucial for forming and maintaining quality close relationships. Indeed, in choosing potential romantic partners or close friends, it is vital to determine whether they are trustworthy (Rempel et al., 1985) and responsive to your welfare (Reis et al., 2004). Those who act selfishly are likely to be low in responsiveness (i.e., low in understanding, validating, and caring for their partners and their partners' needs; Reis & Clark, 2013). Moreover, those who continue to act selfishly, even after receiving feedback on their actions, are likely to be unresponsive partners in general and thus are especially important people to avoid. Perceivers are quick to detect such morally bad people (Baumeister et al., 2001; Fiske, 1980) but also form less stable impressions of them—enabling them to more readily update a bad first impression (Siegel et al., 2018). This flexibility in impression formation is itself extremely useful. When we detect selfishness from someone we are in a close relationship with, it is crucial to discern whether their selfishness was situational, and they should be forgiven, or whether it is likely to happen again, and they should be avoided.

Detecting selfishness in ourselves is less straightforward. Being labeled selfish has clear negative moral connotations in human life. Indeed, it is one of the least likable qualities a person can possess (N. H. Anderson, 1968). Consequently, a tension should exist between identifying one's desires as selfish when others are likely to have the same perception and avoiding identifying one's desires as selfish. Indeed, prior theorizing has suggested that people possess conflicting goals to see themselves in both a reasonably accurate and self-serving light (Kunda, 1990; Mazar et al., 2008; Sedikides, 1993).

In most cases, there are clear benefits to detecting our own selfishness that outweigh the gains of acting on selfish desires. Selfishness not only goes against most people's personal moral codes (Bolton et al., 1998) but also tends to be punished by others (Fehr & Gächter, 2002). Thus, it is perhaps not surprising that psychological and neural evidence support the idea that people devalue actions that are profitable yet harmful to others (Crockett et al., 2017; Stellar & Willer, 2014). For instance, Stellar and Willer (2014) found that people ascribe less value to, and exert less effort to obtain, money that has immoral associations. Moreover, Crockett and colleagues (2017) found that neural representations of value are dampened for otherwise rewarding actions when those actions involve harm to others.

Such devaluation could occur when a desire is deemed selfish because detecting selfishness in ourselves can, in theory, provide the same three key benefits outlined above. That is, it can provide self-protection by helping us identify when we, ourselves, are likely

Table 2. Related but Distinct Psychological Concepts

Concept	Definition	Example	Conceptual overlap	Key work
Absentmindedness	Failing to recall or attend to info that is appropriate for the current situation	Failing to recall a new colleague's name immediately after meeting them	Situated violation of expectations	Schacter (2002)
Aggression	Any behavior directed toward another person with the immediate intent to cause harm	A child intentionally pushing another child to the ground	Presence of socially situated desires	C. A. Anderson & Bushman (2002)
Competitiveness	Desiring to maximize one's own outcomes relative to others	A CEO wanting her company to outearn its competitors	Presence of socially situated desires	Van Lange (1999)
Individualism	Desiring to maximize one's own outcomes with little to no regard for others	An employee not wanting to give a portion of his paycheck to charity	Presence of socially situated desires	Van Lange (1999)
Egocentrism	A failure to differentiate others' cognitive perspectives from one's own	A teenager believing his friends fixate on his appearance as much as he does	Failure to consider minds	Elkind (1967)
Greed	A dissatisfaction of not having enough along with a desire to acquire more of something	A millionaire feeling dissatisfied with owning only five vintage cars and wanting more	Presence of desires	Seuntjens et al. (2015)
Narcissism	An excessive interest in one's self-image and attributes	Excessively promoting one's own positive traits on social media	Presence of desires	Buffardi & Campbell (2008)
Self-serving bias	A tendency to make attributions that put oneself in the best possible light	Tending to attribute the success of group projects to oneself over others	Presence of desires	Harvey & Weary (1984)
Social hostility	A tendency to limit another person's options to signal hostility or spite	Taking the seat that a colleague prefers to sit in for meetings to spite them	Presence of socially situated desires and other minds	Van Lange & Van Doesum (2015)

to be judged negatively and rejected by others. It can also promote group coordination by reminding us to cooperate with our in-groups and contribute to joint goals. Last, it can grant us the ability to both avoid being negatively judged by others and to send positive signals about our morality. Indeed, avoiding being seen as selfish, and expressing guilt when we are perceived as such, allows us to maintain our own moral status.

In these respects, detecting psychological selfishness appears to offer advantages over merely detecting selfish genes, self-interested behavior, or egoistically motivated prosociality. Although detecting each of these phenomena no doubt confers some benefits to perceivers, these benefits appear to differ in important ways. Indeed, by detecting manifestations of selfish genes (e.g., that someone has an efficient metabolism), self-interested behavior (e.g., that someone enjoys eating breakfast), or egoistically motivated prosociality (e.g., that someone helped others for personal gain), people simply do not reap the same degree of benefit for self-protection, group coordination, or moral signaling as they do when they detect psychological selfishness.

Biases in the Detection of Psychological Selfishness

Despite the benefits of detecting selfishness in ourselves, people nonetheless act on selfish desires at least occasionally, and understanding biases in the detection of selfishness can help illuminate this phenomenon. Theories and evidence suggest that a number of biases may lead us to more readily detect psychological selfishness in others than in ourselves (Carlson & Zaki, 2021; Epley & Dunning, 2000; Van Lange & Sedikides, 1998). For instance, prior work has suggested that people believe they are more likely to engage in generous

actions (Epley & Dunning, 2000) and to be altruistically motivated to help others (Carlson & Zaki, 2021) compared with the average person. Such findings are consistent with the view that people often are motivated to avoid seeing themselves as selfish as a form of self-image maintenance (Mazar et al., 2008).

It is noteworthy that our model provides insights into the *targets* of biases in detecting selfishness. Indeed, to avoid viewing their own desires as selfish, people could make a biased inference about any of the four components of selfishness in our framework:

Revising the situation. To minimize perceived selfishness, our framework predicts that an actor might redefine key aspects of the situation. For instance, returning to our earlier example, Joe might decide that anyone who is not standing near the cake likely has already had cake, does not want more, and is therefore not relevant to the current situation—thus permitting Joe to take the last piece without feeling selfish.

Revising desires. In addition, our framework predicts that an actor might distort their beliefs about their true desire. For instance, Joe might convince himself, for the moment, that he does not desire the last piece of cake but instead wants to take the last piece home for a roommate, thus allowing him to eat the cake later without judgment.

Revising others' desires. Moreover, our framework predicts that an actor, in thinking about other minds in the situation, might also reappraise the strength of other people's desires. For instance, Joe might convince himself that most people do not like chocolate cake and thus others in the situation probably would not desire the last piece.

Revising expectations. Last, our framework predicts that an actor might directly revise their expectations for the situation. For instance, Joe might convince himself that, because he has been the highest performer at work over the last quarter, his coworkers would agree that he is entitled to the last piece of cake.

These predictions about how people might revise their beliefs about selfishness remain to be tested in future work, but they are consistent with prior work (Hughes & Zaki, 2015; Kunda, 1990). People frequently hold conflicting "definitions" (or perceptions) of the same situation that serve their needs (Goffman, 1959), including situations that involve selfishness (Stebbins, 1981). Moreover, research on motivated reasoning suggests that people deploy a rich suite of biased cognitive strategies to revise any of the four components of selfishness mentioned when they wish to arrive at a particular conclusion (Kunda, 1990; Lemay & Clark, 2015). Finally, researchers studying self-deception have theorized that people can hold distorted beliefs about their true preferences (Von Hippel & Trivers, 2011), and this logic could sensibly be applied to beliefs about others' preferences as well.

Of course, *nonmotivated* biases also may affect the detection of selfishness. For instance, people tend to exhibit egocentric biases (Epley et al., 2004; Ross et al., 1977) that may impede their ability to consider others' desires or the prevailing expectations for a situation. Thus, teasing apart the role of motivated and nonmotivated biases in detecting selfishness remains an important direction for future work as well.

Relational Influences on the Detection of Psychological Selfishness

One potentially fruitful application of this framework is to examine its predictions within different relational contexts, in which expectations for behavior vary considerably (Clark et al., 2017). Specifically, here, we highlight the distinction between *communal* and *exchange* relationships for the detection of selfishness. Communal relationships are those in which benefits are given noncontingently in response to partners' welfare (Clark & Mills, 1979, 2011). The strength of such relationships will vary depending on how responsible one feels for the other's welfare, and thus expectations for incurring costs (e.g., time, money, and effort) to benefit the other will noncontingently vary (Mills et al., 2004). In contrast, exchange relationships operate under the assumption that benefits will be given and repaid with tit-for-tat rules in mind. Because of the different expectations these relationships give rise to, the detection of selfishness will vary greatly across these two types of relationships.

For instance, in an exchange relationship—which is a relationship type common among coworkers—not offering to bring a coworker coffee in the morning would likely not be seen as selfish because there is no expectation that you owe them one. This would be true, even if they desired a coffee and you knew they wanted one. However, in a communal relationship—which is common with romantic partners (as well as friends and family)—not offering to bring a partner coffee when they desired a coffee, and you knew that they desired one, might be seen as selfish. This is because partners are expected to attend to and be responsive to each other's desires.[9]

By contrast, if your coworker (with whom you have an exchange relationship) brought you a coffee at your request and you did not pay them back, that coworker might perceive you as selfish because, within an exchange context, you are expected to pay them back.

However, in a communal context, you would not be seen as selfish for not paying them back because partners often expect to benefit each other noncontingently.

Another way relational influences might shape the detection of selfishness is through positive illusions (Murray et al., 1996). In healthy intimate relationships, partners often see each other through rose-colored glasses—overlooking the other's flaws and mistakes. For example, when a partner forgets a promise to cook dinner, the other partner might attribute this to that partner being tired or stressed about work rather than to carelessness or laziness. Crucially, our framework clarifies when people are—for better or for worse—exhibiting such positive illusions in detecting selfishness in their partner. For example, it illuminates the conditions under which a partner expressing a desire to finish their partner's dinner is seen as selfish. Indeed, in much the same way people can revise their representations of situations, desires, others' desires, and expectations to avoid attributing selfishness to themselves, they might exhibit similar biases in detecting selfishness in close others.

Emotion and the Detection of Psychological Selfishness

One interesting implication of detecting selfishness is that it helps to predict emotional states that we are likely to experience in social situations. One key determinant of which states will be experienced is whether selfishness is being detected in ourselves (*self-detection*) or others (*social detection*). Here, we examine emotions associated with each perspective. Although we note potential links between the detection of selfishness and emotion, we do not claim that such emotions always follow from detecting selfishness—in some cases perceivers might experience other emotions or no emotion at all.

Emotional outcomes of self-detection

Recognizing ourselves as having acted on a selfish desire typically gives rise to negative emotions. Although there are numerous emotions that may arise from the detection of selfishness, we limit our discussion to two particularly relevant emotional responses: embarrassment and guilt.

Embarrassment. Embarrassment tends to arise after any event in which an individual feels that others have formed undesirable impressions about them (Leary et al., 1996). Feelings of embarrassment often are concerned with self-presentation and thus may arise from events as small as a person's zipper being down at dinner because this may lead others to form impressions that the person is uncouth. Thus, if one believed that others saw them as acting on (or betraying) a selfish desire, embarrassment could likely follow. To illustrate, Joe might immediately feel embarrassment if a coworker, Taylor, publicly called him out as selfish for putting the last piece of cake on his plate.

By expressing embarrassment, actors signal to others that this event does not accurately reflect who they are and that they wish to rectify the situation. This allows actors to reassert a positive identity to observers and undo the negative social image created by the event (Leary et al., 1996). Indeed, after social transgressions, people prefer those who become embarrassed to those who do not, judging them as more likable (Keltner & Anderson, 2000) and prosocial (M. Feinberg et al., 2012). As a consequence, experiencing and expressing embarrassment may be effective for undoing perceptions of selfishness among others and work toward undoing any damage done to interpersonal bonds.

Embarrassment also serves useful self-functions. Experiencing embarrassment sends a strong self-signal that one recognizes a transgression to be unrepresentative of one's true self. Thus, insofar as embarrassment can motivate reparative actions, it could in turn help reduce cognitive dissonance resulting from the discrepancy between one's actions and one's moral identity (Aronson, 1968) and thus prevent future transgressions.

Guilt. Another emotion that might follow detecting selfishness in oneself is guilt. Guilt tends to arise when we believe that we have violated a relationship standard, particularly within the context of close, communal relationships (Baumeister et al., 1994). For instance, if Joe and Taylor were not coworkers, but romantic partners, Joe might also feel guilt if Taylor expressed that it was selfish for him to take the last piece of cake without at least considering her own desires.

It is noteworthy that the experience of guilt motivates actors to correct the situation, and the expression of guilt signals to partners that they recognize their norm violation and intend to take corrective actions (Clark et al., 2017). Unlike embarrassment alone, which may or may not convey acceptance of blame to others, expressions of guilt clearly convey that one accepts blame for the transgression. This acceptance of blame through the expression of guilt toward a partner signals that one really is a worthy, even if imperfect, partner and wishes to be responsive to a partner's needs. Expressing guilt also conveys care and serves to repair and maintain relationships (Baumeister et al., 1994; Overall et al., 2014). Thus, expressing guilt for one's selfishness serves both dyadic functions, as well as social-image maintenance.

Much like embarrassment, guilt is also useful for self-image maintenance. The experience of guilt, as well

as the subsequent actions stemming from guilt, serve to reduce cognitive dissonance within an actor. If one sees oneself as an unselfish person, then guilt from a selfish act may serve to restore positive moral beliefs about the self.

Last, it is worth noting that guilt and embarrassment are, to some extent, functionally distinct and that these two emotions can and do co-occur within a person (Tangney et al., 1996).

Emotional outcomes of social detection

Detecting selfishness in others also tends to coincide with experiences of negative emotions. As before, we limit our discussion to only two particularly relevant emotions that follow the detection of selfishness in others: anger and hurt. In addition, we again use these emotions as examples of what may occur after an instance of selfishness and do not assert that these emotional reactions will always occur.

Anger. One common response to detecting selfishness in others is the experience of anger. Anger arises when we face a challenge or threat caused by another person's unjustified behavior (Hutcherson & Gross, 2011). Moreover, the experience of anger psychologically prepares us for confrontation (Tamir, 2009). To illustrate, Taylor would likely feel anger if she witnessed a coworker, Joe, put the last piece of cake on his plate when Taylor had clearly not had a piece and wanted one. Her anger might, in turn, move her to publicly call out Joe as well.

Feeling anger can be functional because it signals the presence of an injustice and can amplify our motivation to intervene (Lemay et al., 2012). Thus, anger is well suited for securing the benefits associated with detecting selfishness. First, it alerts partners to our judgment that they have acted selfishly. Second, it signals a sense of authority and leadership, putting the expresser in a state appropriate for punishing others (Seip et al., 2014). Last, anger easily spreads, allowing people to unify for a particular cause (Crockett, 2017; Kelly et al., 2016). Given the intimate ties between selfishness and anger, one implication of our framework is that, to the extent that the framework captures when selfishness is likely to be perceived, it should also help predict when anger is likely to be felt by others in the situation.

Hurt. Detecting selfishness can also lead to hurt feelings. Hurt feelings occur when we believe a close partner has violated cooperative expectations for the relationship (Lemay et al., 2012). Thus, although it is unlikely that one would feel hurt from the selfishness of a stranger, one could very well feel hurt by the selfishness of a romantic partner. For example, Taylor might instead feel hurt if Joe were her partner and she witnessed him put the last piece of cake on his plate when she had clearly not had a piece and wanted one.

As with anger, expressing hurt is functional for gaining the benefits of detecting selfishness in others. Indeed, expressing hurt after detecting selfishness can elicit feelings of guilt in actors, which might in turn motivate actors to initiate the desired relational repair (Lemay et al., 2012). If hurt feelings are not met with guilt and relational repair, this feeling may transform into anger and motivate a person to withdraw from the relationship.

Anger and hurt, although experientially and functionally distinct, can and do co-occur (Leary & Leder, 2009; Lemay et al., 2012). That is, after a partner's selfish act, one might feel hurt and desire relational repair but also feel anger and a desire to retaliate or withdraw from the relationship. Either response can be functional depending on the situation. Indeed, in some cases, it is best to seek relational repair (e.g., after a circumstantial act of selfishness by a partner), and other times it is best to withdraw and seek other relationships (e.g., when a recurring theme of selfishness has emerged).

Emotion and the perks of detecting selfishness

In emphasizing emotional outcomes above, we aim to highlight a crucial consequence of selfishness. Experiencing and expressing emotions after detecting selfishness is, in many ways, vital for reaping the benefits of detecting selfishness at all. Without feeling and expressing emotions such as embarrassment or guilt after seeing oneself as selfish,[10] people might "push away" valued social and romantic partners and experience lower self-esteem. Likewise, without feeling and expressing anger or hurt after seeing others act selfishly, people may find themselves in dysfunctional friendships and harmful relationships. Thus, examining the emotional outcomes of selfishness appears crucial for achieving a richer understanding of how selfishness unfolds in everyday life.

Conclusion

Selfishness is a widely invoked yet poorly defined construct in psychology. Historically, psychologists have drawn on conceptions of selfishness from other fields, which has contributed to this ambiguity. These conceptions include (a) an evolutionary view of selfishness, selfish genes, that centers on fitness consequences for organisms; (b) an economic view of selfishness, self-interested behavior, that centers on behaviors that benefit the self over others; and (c) a philosophical view of selfishness, egoistically motivated prosociality, that

centers on ulterior (self-focused) motives for seemingly altruistically motivated behavior. Here, we argued that these views often do not capture a psychologically meaningful form of selfishness, and we addressed this gap in the literature by offering a concrete definition and framework for studying selfishness.

We proposed a view in which selfishness is psychologically constructed in the mind of each perceiver. Specifically, we theorized that people perceive selfishness in themselves and others when they detect a situated desire to act in a self-beneficial way that violates a prevailing social expectation, such that it disregards the desires of others in the situation. Consequently, detecting psychological selfishness will depend on a perceiver's representation of a situation, desires, other minds, and expectations. As argued above, the components of this framework vary on the basis of one's current social situation. Thus, unlike universal approaches (e.g., rational self-interest and psychological egoism), the proposed framework can account for why the same desire will be viewed as selfish, or completely ordinary, depending on which actions seem plausible, which peoples' desires seem relevant, and which expectation seems most salient from the perceiver's point of view.

We believe that adopting this psychological framework can deepen our understanding of the nature of selfishness. In the proposed model, selfishness unfolds within rich social situations that elicit specific desires, expectations, and considerations of others. Moreover, detecting selfishness serves the overarching function of coordinating and encouraging cooperative social behavior. To detect selfishness is to perceive a desire to act in violation of salient social expectations, and a rich array of psychological responses tend to follow. Here, we highlighted potential emotional responses to selfishness, including guilt and embarrassment when detecting selfishness in ourselves and anger and hurt when detecting selfishness in others. We also highlighted how these emotional responses, and behavioral responses to selfishness more broadly, depend critically on the relationship dynamics between those involved in the situation (e.g., whether one detects selfishness in a colleague or a romantic partner). Finally, we considered the role of self-serving biases in the detection of selfishness. Specifically, we proposed that when we detect selfishness in ourselves (compared with others), we sometimes might revise our model of the situation, which desires are relevant, or which expectations apply to escape judging ourselves as selfish—which could in turn perpetuate one's engagement in selfishness.

Selfishness is a morally laden concept (N. H. Anderson, 1968). As such, it is especially in need of proper criteria for being measured, manipulated, and applied to peoples' actions and motives. Here, we offer an account that outlines clear criteria under which selfishness is detected. We believe conceptualizing selfishness in this way has many important and interesting implications (see Box 1).

Box 1. Ideas About Selfishness in the Proposed Framework

1. *Motives, not behaviors.* Following classic works in social psychology (Heider, 1958; Lewin, 1938), our framework emphasizes situation-specific motives as opposed to behavior as the key element of selfishness. (Of course, motives that are suppressed will lead to different inferences than will motives that are acted on.)
2. *Selfishness can be naive.* People can be either aware of, or naive to, their own selfishness depending on whether they accurately consider their desires with respect to the situation, the minds of others, and the expectations those minds likely have. Thus, observers may perceive selfishness whereas actors do not.
3. *Selfishness can be rationalized.* People may satisfy all the criteria for selfishness yet self-servingly justify their behavior as appropriate by reappraising the relevant situation, desires, minds, or expectations. In other cases, people might exhibit similar distortions to rationalize the selfishness of a socially close other or their in-group.
4. *Perceiving selfishness requires a developed mind.* Detecting selfishness requires the sociocognitive ability to represent desires, situations, minds, and expectations—abilities that each have their own unique developmental trajectory. Those affected by pathological impairments in these abilities (e.g., autism spectrum disorder or psychopathy) may not view themselves or others as selfish.
5. *Selfishness is specific to species capable of detecting it.* In much the same way social psychologists posit that only an individual that had the capacity to detect altruism could be altruistically motivated (Batson, 2011), we posit that selfishness is specific to species that can detect selfishness in others and themselves—that is, developed humans.
6. *Selfishness is subjective.* The study of psychological selfishness requires probing actors' and observers' perceptions. We should be asking actors and perceivers whether they think an action or motive is in fact selfish as opposed to simply constructing conditions that we as experimenters believe are selfish.
7. *Selfishness is inferred with uncertainty.* Inferences about situations, desires, minds, and expectations are inherently noisy and uncertain (e.g., Siegel et al., 2018). Thus, one's degree of uncertainty about these states will drive the confidence with which selfishness is perceived.

It is important to note that our aim is not to provide a model that predicts every possible usage of the word but rather one that captures a psychologically meaningful "center of variation" in how the term is commonly used in social life (Wittgenstein, 1980). Our emphasis on the subjective experience of selfishness echoes recent calls to restrict the term "emotion" to the subjective experience of emotion as well (Barrett, 2017; LeDoux & Hofmann, 2018).

We encourage psychologists to adopt clear conceptual definitions of selfishness. We believe psychological selfishness can be fruitfully examined by explicitly probing and manipulating human perceptions of situations, desires, minds, and expectations. For instance, our model predicts that eliciting participant's desires, perceptions of others' desires, and social expectations within the context of a dictator game would be crucial for understanding their perceptions of their own or others' selfishness. Our model could also be tested with experience sampling methods (e.g., see Hofmann et al., 2014) by having people report instances of perceived selfishness in which they explicitly report the situation, their desires, relevant others' desires, and expectations. Last, when labeling people selfish, we encourage experimenters to consider whether this label is warranted when tested against the four components of the psychological model proposed here.

Selfishness is an important aspect of human life, and it has played a role in many fundamental debates about human nature and morality (Batson, 2011; Miller, 1999; Wallach & Wallach, 1983). One important contribution the current work makes is to reframe these debates by considering the psychologically constructed nature of selfishness. Psychologists, influenced by other fields, have historically presented selfishness as an instinct (selfish genes), a force guiding our every choice (rational self-interest), or a hidden motive behind our good deeds (psychological egoism). These ideas about selfishness, despite being incomplete if not entirely refuted, persist in the field, and especially in discussions of human morality.

With the current work, we hope to refocus psychological thinking about selfishness toward how people represent social situations, their desires, the minds of others, and social expectations. By doing so, we believe psychologists can uncover how discrepancies in these representations (e.g., failing to consider the desires of others and relevant social expectations) give rise to desires and actions we view as selfish. Indeed, we hold that many conflicts in relationships or group settings involving selfishness arise not because people are fundamentally selfish but because of differences in our desires, in our expectations, and in how we perceive situations.

This points to an alternative path for intervening on selfishness. Prior work has suggested that selfishness can be deterred through punishment (Boyd & Richerson, 1992), offering egoistic incentives for generosity (Cialdini & Kenrick, 1976), or exerting inhibitory control over one's instincts (Stevens & Hauser, 2004). Our account suggests that researchers should also consider how selfishness is perceived. If we accept, as proposed above, that people want to avoid being seen as selfish and often exhibit biases that obscure their own selfishness, then deterring selfishness might involve getting people to more accurately detect when others would view them as selfish. To this end, researchers could encourage people to actively consider whether their desires align with the desires and expectations of others in social settings. This could be achieved by motivating people to be more mindful of how they can preserve others' ability to pursue their preferences (i.e., greater social mindfulness; Van Doesum et al., 2013) or to more often seek out others' perspectives through conversation (see Andreoni & Rao, 2011; Eyal et al., 2018). Indeed, such avenues could help align the way people perceive social situations, thereby deterring the desires and acts we deem to be selfish.

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Notes

1. Indeed, R. W. Carlson and M. S. Clark have themselves referred to phenomena as selfish in ways that are critiqued in this article (e.g., Carlson et al., 2016; Clark, 2011).
2. Jevons (1866), one of the founders of neoclassical economics, clarified the scope of the field's assumptions when he wrote "economy does not treat of all human motives. There are motives nearly always present with us, arising from conscience,

compassion, or from some moral or religious source, which economy cannot and does not pretend to treat" (p. 304).

3. Behavioral economists also focus on behaviors that indirectly maximize one's economic rewards, such as behaviors that boost one's reputation (Nowak et al., 2000).

4. Indeed, commenting on a realistic bargaining experiment, Edwards (1954) foretold some key features of economic games:

> This is naturalistic, but produces data too complex and too nonnumerical for easy analysis. A simpler situation in which the possible communications from one bargainer to another are limited . . . in which the subjects do not see one another, and in which the object bargained over is simple, preferably being merely a sum of money, would be better. (p. 410)

5. We use the term "desire" rather than "motive" because this term is more associated with inaction, as opposed to motives, which highlight something "moving us" to act (Perugini & Bagozzi, 2004).

6. This does not include desires that are directed toward others, such as the desire to harm others, or to beat others in a competition. (See the distinct concepts of aggression and competitiveness in Table 2.)

7. However, for interesting developmental work on the moral sense of 6- and 10-month-old infants, see Hamlin et al. (2007).

8. Because expectations are based on stable social norms, observing repeated instances of selfishness from one person would typically not change the expected norms for the situation, even if the person's norm violation might be expected (or anticipated) by others.

9. Of course, other appraisals can co-occur when we detect selfishness. For instance, not offering to bring a partner coffee might also be deemed thoughtless and uncaring. In fact, this is likely because these other constructs are conceptually similar to selfishness.

10. Although not explicitly mentioned here, people might also *anticipate* guilt before acting on a detected selfish desire, thus devaluing this course of action.

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