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Implicit and Explicit Motivation Crowding in Prosocial Work

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ABSTRACT

Public and nonprofit organizations often emphasize the prosociality of their employees as critical to performance, given the prosocial nature of the missions of these organizations. However, whether prosocial motivations translate to prosocial work behaviors is not always clear. Such assessments are complicated by the inherent difficulty in accurately assessing prosociality in the workplace, as it is potentially prone to social desirability bias. In this article, we examine whether one's explicit, or stated, prosocial motivation is as resilient to motivation crowding as one's implicit motivation. We find that explicit prosocial motivation is much more susceptible to motivation crowding than implicit prosocial motivation when performance expectations allow material self-interest to be more easily maximized. Moreover, mission match, or the extent to which an individual agrees with the specific mission of an organization, shows consistency across performance regimes. These findings have implications for our theoretical understanding of prosocial motivation and for its value in real-world applications. Additionally, our research highlights the importance of considering implicit dimensions of work motivation in relation to explicit dimensions in the potential for motivation crowding.

KEYWORDS

mission match; motivation crowding; prosocial motivation; prosocial work behavior

In this article, we are interested in the extent to which monetary performance incentives work against or in conjunction with different dimensions of prosocial motivation when the objective of one's task involves prosocial work behaviors. This has important implications in civil society, particularly in nonprofit or public sector organizations with prosocial missions, organizations with volunteerism expectations, and social enterprises in the private sector, in that: (1) there is empirical evidence that employees in these organizations can differ substantially in their motivations from canonical private sector employees (e.g., Houston, 2006; Meyer, Ohana, & Stinglhamber, 2017; Perry & Wise, 1990); (2) employees in organizations

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with prosocial missions often make choices on whether to go above and beyond their delineated roles to deliver social goods (e.g., Maynard-Moody & Leland, 2000; Resh, Marvel, & Wen, 2018); and (3) rewards for output-related performance in public and nonprofit sector organizations have become common (e.g., Frey, Homberg, & Osterloh, 2013; Moynihan, 2006; van Thiel & Leeuw, 2002). Our primary argument is that individuals' implicit, or *unconscious,* prosocial motivation will be more resistant to motivation crowding than individuals' explicit prosocial motivation. Our secondary argument is that the difficulty of meeting a performance incentive system's goals will moderate the amount of motivation crowding that occurs in the presence of extrinsic incentives. Finally, we also argue that the degree to which individuals agree with the specific mission of an organization—that is, the degree of their "mission match" with an organization—is just as important a determinant of prosocial work behaviors as is individuals' prosocial motivation.

We focus on these lines of inquiry because they have important implications for both theory and practice. With respect to theory, the influence of implicit prosocial motivation on individuals' work behaviors is something we know very little about. Recent evidence suggests that there is in fact an implicit, or unconscious, dimension to prosocial motivation, and that this unconscious dimension of prosocial motivation may be of explanatory value in models of work motivation (Marvel & Resh, 2018). Incorporating implicit prosocial motivation into existing theoretical accounts of motivation crowding can yield considerable new knowledge about an important, well-established phenomenon. Moreover, examining how the difficulty of a performance incentive system's goals mitigate or exacerbate motivation crowding promises to contribute to a more nuanced theoretical account of the conditions under which motivation crowding is more or less likely to occur. With respect to practice, the perennial and seductive appeal of performance pay, seen most recently in the Trump Administration's executive budget proposals, demands that public management scholars attend to the question of how monetary incentives can be expected to undermine or reinforce public sector employees' work motivations.

The incorporation of implicit prosocial motivation into existing theoretical accounts is especially important because stated motivations and self-concepts may be far different than how one actually behaves. If a subject is exposed to an unreachable performance expectation for prosocial work outputs (for instance), to what extent does one's elicited or stated desire to help other people lead to ostensible prosocial behavior in attempting to meet that threshold (i.e., when the subject *knows* that threshold is unlikely to be met)? In other words, is that prosocial behavior "just for show" to conform to one's *stated* preference or image, even if it may not be one's

core preference (Ariely et al., 2009)? Conversely, how consistent is this stated prosociality stable under conditions in which material self-interest is more easily maximized?

The consideration of mission match alongside prosocial motivation is important because whereas prosocial motivation is a highly general characteristic, mission match is highly specific, and we know little about how these differing constructs factor into individuals' work behaviors when they are considered simultaneously. An organization's mission statement "gives a sense of purpose and direction to the organization, legitimizes its existence while providing the context for the development and implementation of a successful strategic plan" (Macedo, Pinho, & Silva, 2016, p. 37). Insofar as an employee is motivated by this specific set of values, prior research evaluating the importance of a purposive mission in prosocial work finds that it can be a stimulus to organizational citizenship behaviors, help cultivate general prosocial motivation, reinforce stakeholders' views of an organization's legitimacy, and mediate individual-level performance (Forbes & Seena, 2006; Macedo et al., 2016). Hence, the inclusion of mission match alongside standard measures of prosocial motivation in models of work behavior may add to our understanding of how these two constructs do or do not reinforce each other. To our knowledge, the present study is the first to investigate motivation crowding using a model that includes mission match as well as implicit and explicit measures of prosocial motivation.

Theory and hypotheses

Mission match and extrinsic material rewards

While both extrinsic and intrinsic motivations stimulate work effort (Dysvik & Kuvaas, 2013; Grant, 2008a), the relative balance between extrinsic incentives—such as a material reward or punishment—and intrinsic motivations is delicate and contingent (Frey, 1994; Frey & Jegen, 2001; Frey & Oberholzer-Gee, 1997). This may be the case especially in organizations with prosocial missions, where employees are more likely attracted to careers out of some "other-regarding" motive (Cowley & Smith, 2014; Wright & Grant, 2010). Work persistence, perceived meaningfulness of task, and performance are found to be positively related to prosocial motivation and mission match (Carpenter & Gong, 2016; Grant, 2008a; Grant et al., 2007; Gregg, Grout, Ratcliffe, Smith, & Windmeijer, 2011; Resh et al., 2018; Smith, 2016; Wright & Grant, 2010) and theoretically important traits for workers in organizations with prosocial missions in particular.

Carpenter and Gong (2016), for instance, show that matched workers are more productive than are mismatched workers. While performance

expectations are constant across their test groups, performance incentives have a balancing effect on productivity. Extrinsic monetary performance incentives, in their experiment, increase the work effort output significantly for mismatched workers, whereas for matched workers, the effect is nominal. Smith (2016) likewise finds that mission match is associated with increased work effort. Smith (2016) asks subjects to complete a simple task within a certain time. Meeting this uniformly imposed performance expectation enabled subjects to make a larger donation to randomly assigned organizations based on their performance relative to the expectation. Hence, matched workers were better able to meet the performance expectation than were mismatched workers.

Resh et al. (2018), in response to Smith's work, test how much mission-matched workers persist in their work efforts under conditions of undue performance expectations. They find that both mission match and the self-sacrifice dimension of public service motivation are associated with work persistence. However, self-sacrifice has no moderating effect on the relationship between mission match and work persistence, and it has a much smaller substantive effect on persistence than does mission match.

These findings bolster previous considerations of organizational mission as a central influence to levels of employee satisfaction, effectiveness, and performance—especially in public and nonprofit sector organizations (e.g., Rainey & Steinbauer, 1999). Akerlof and Kranton's (2005, 2010) substitutability thesis proposes that *any* organization will function better when it relies on more than just monetary compensation schemes (such as engendering mission support) to incentivize work effort. Likewise, it is presumed that agents who identify highly with the mission of their organizations tend to be more persistent in devoting their individual efforts to achieve the generalized objectives of the organization (Resh et al., 2018). Wright (2007) concludes, it may be that "the intrinsic value afforded by the organization's mission" (p. 60) imposes a greater impact on performance than the availability of extrinsic rewards in organizations with prosocial missions.

Employing a random assignment of varying organizational missions to a common task across subjects should exploit the extent to which an organization's purpose may interact with different performance expectations exogenously imposed on a subject (Wright, 2007). Yet, such a randomized treatment is difficult to achieve in a real-world working context, thereby limiting our understanding of the causal mechanisms of prosocial work behaviors. To further complicate the matter, when randomized treatments of mission match have been accomplished in experimental settings, they rely on single dimensions of "match" and involve only two diametrically opposed organizations (e.g., Brady Campaign versus the National Rifle Association [Smith, 2016]). In actual labor markets, the influence of

mission match more plausibly falls somewhere along a continuum between two extremes. Categorizing matched and mismatched workers using only two polarized organizations can diminish the benefits derived from a theoretically exogenous treatment of mission match because such a treatment could be potentially compromised by the subjects' philosophical predispositions.

In this study, we attempt to assuage this concern. We induce variation in mission match by randomly assigning subjects to one of five potential nonprofit organizations with purposive prosocial missions. Here, we offer a more nuanced measurement than has been proffered in experimental studies of the influence of mission match: we accommodate both the self-concordance and positive social impact a subject attributes to a given organization. Smith (2016) suggests that individuals with a variety of different pursuits perceive an alignment between their desires and organizational missions because the stated organizational mission either intends to significantly benefit society (i.e., positive social impact) or closely reflects their personal preferences and interest (i.e., self-concordance). In incorporating both dimensions, we expect this aggregate match to translate to prosocial work behavior.

H1: *Mission match will predict prosocial work behavior.*

Moreover, following Carpenter and Gong (2016), performance expectations that allow for employees to more feasibly maximize their self-interest should have no significant moderating effect on the relationship between prosocial mission match and prosocial behavior.

H2: *Performance expectations will have no moderating impact on the relationship between mission match and prosocial work behavior.*

Implicit versus explicit prosocial motivations

Prosocial motivation scholarship is rooted empirically in analysis using survey questions, finding that prosocial motivation facilitates enhanced persistence, performance, and productivity by enabling dedication to a cause (Thompson & Bunderson, 2003) or moral principle (Shamir, 1990), a commitment to the people who benefit from one's efforts (Grant, 2007), and a willingness to accept and utilize negative feedback (Meglino & Korsgaard, 2004). Yet, much of human cognition occurs outside of our conscious awareness and control (Freud, 2010; Greenwald, Nosek, & Banaji, 2003; Nisbett & Wilson, 1977). Empirical work examining prosocial motivation as well as work examining "motivation crowding" of extrinsic versus intrinsic motivations has not sufficiently accommodated the notion of an implicit dimension of intrinsic motivations. In other words, that which a subject

explicitly states may not be reflective of his core motivation or inner self. Hence, traditional explicit measures of prosocial motivation may have limitations in explanation.

A variety of fields outside of psychology recognize that unconscious—or implicit—cognitive processes and mental products (including implicit attitudes, feelings, and self-concepts) influence explicit attitudes, decision making, and behavior. Evidence suggests, for instance, that individuals' implicit political attitudes affect their voting behavior; that individuals' biases affect how they perceive the performance of public versus private institutions; that individuals' implicit biases affect how they interact with and judge racial minorities; and that individuals' implicit collaborative self-concepts—that is, the degree to which individuals unconsciously view themselves as cooperatively inclined—predict their actual collaborative behavior in organizations more than their explicitly stated intentions (Arcuri, Castelli, Galdi, Zogmaister, & Amadori, 2008; Marvel, 2016; Marvel & Resh, 2018; Srivastava & Banaji, 2011; Staats, 2013). Implicit cognition is powerful precisely because it operates unconsciously: our implicit attitudes, feelings, and self-concepts influence our explicit attitudes, decision making, and behavior without our knowledge or consent.

We use the most commonly used instrument for measuring individuals' implicit mental products—the Implicit Association Test, or IAT—to measure individuals' *implicit* prosocial motivation (I-PRO). Specifically, we examine whether I-PRO predicts prosocial behaviors that previous research suggests are associated with individuals' explicit prosocial motivation (E-PRO). We are interested in whether there is an unconscious component to individuals' prosocial motivation that predicts *observable* prosocial behaviors. We use a "real-effort" experiment to test this proposition. In doing so, this test not only contributes to the present study, but it adds to a wide-ranging number of validation tests for a relatively new measurement of implicit prosocial motivation (Marvel & Resh, 2018).

Crowding prosocial motivations

There are several behavioral explanations for the crowding out of prosocial motivations (Dickinson, 1989; Frey, 1994). Prosocial motivations are culturally valued and reinforced by generalized (but not discrete) praise. The fact that these behaviors are not linked to extrinsic reinforcers is part of the basis for approval. Employees often seek to make a difference in other people's lives, and choose employment in organizations with missions that fulfill those motivations (Grant, 2007; Perry & Wise, 1990). The presence of tangible material rewards, therefore, may lead to less generalized praise. So, people are left with less generalized approval when an extrinsic reward has

been offered for their work behavior. This, in turn, tends toward less intrinsically driven behavior (e.g., Bénabou & Tirole, 2005; Carpenter & Gong, 2016; Deci, Koestner, & Ryan, 2001).

Within public administration, a good deal of observational research suggests that motivation crowding is in fact a problem in public sector organizational contexts. Georgellis, Iossa, and Tabvuma (2011), for instance, use longitudinal data from the UK to show that among the public higher education sector and the National Health Service higher extrinsic rewards are associated with lower intrinsic motivation. In a related study, Bertelli (2006) uses survey data to show that motivation crowding occurs among IRS employees with high baseline levels of intrinsic motivation. Jacobsen, Hvitved, and Andersen (2014), using data from a sample of over 3,000 Danish schoolteachers, show that the *perception* of external control systems, including financial incentive systems, is associated with motivation crowding. In view of these nonexperimental findings, we think it is reasonable to expect motivation crowding in our lab experiment.

In the following experiment, we test both a novel implicit and a traditional explicit measure of prosocial motivation to examine motivation crowding across different performance expectations and, under which performance threshold motivation crowding is more likely. As explicit elicitations may provoke a susceptibility to social desirability bias (in both practice and research [Dunn & Shome, 2009; Kreuter, Presser, & Tourangeau, 2008]), is this effect different when accounting for one's implicit prosocial motivation (i.e., one's core motivation or inner self)? Do one's explicit assertions of prosocial motivation hold as much weight toward prosocial behavior when self-interest can be more viably maximized? Is implicit prosocial motivation as "hard-wired" as one might suppose, or is it as susceptible to motivation crowding as explicit prosocial motivation?

It is generally accepted that most behaviors are driven through a combination of both explicit and implicit motivations—a "dual process" model of cognitive processes. Yet it is seldom that prosocial work behaviors are examined as a function of dual implicit and explicit processes. One area of continuous debate among public administration researchers and social psychologists is how to best conceptualize and measure public service or prosocial motivations. In general, however, few researchers appear to focus on implicit cognition as a driver of these motivations. The predominant focus in this scholarship has been on the explicit dimension of prosocial motivation, which is argued to be a cognitive product rather than process.

Aydinli, Bender, Chasiotis, Cemalcilar, and van de Vijver (2014) are exceptional in this sense. They attempt to capture the implicit dimension of prosocial motivation through the qualitative coding of responses of subjects to a Picture Story Exercise. In their study, implicit prosocial

motivation is coded when subjects' descriptions of various pictures contain prosocial themes such as "helping, supporting, protecting, or giving advice" (Aydinli et al., 2014, p. 649). They posit that helping behaviors are determined by the interplay of "two independent motivational channels that can operate in parallel" depending on the context (p. 647).

As we do here, Aydinli et al. (2014) test whether implicit prosocial motivation moderates explicit prosocial motivation. Their focus is on whether the outcome of "helping behavior" is planned or spontaneous, whereas all of the work scenarios we test here are spontaneous. We are interested in prosocial work behavior on behalf of an organization generally, but how that work is motivated by both dimensions of prosociality under varying likelihood that a subject can maximize their own self-interest. Aydinli et al. (2014) find that when the helping behavior is spontaneous, explicit prosocial motivation is only predictive of such behaviors when implicit prosocial motivation is high. Similarly, we expect that implicit prosocial motivation will moderate the predictive power of explicit prosocial motivation on prosocial work behaviors under varying conditions of potential crowding. Because I-PRO is unconscious and automatic compared to the conscious, controlled, and reflective information processing involved with E-PRO, we believe that I-PRO is less susceptible to crowding under work conditions in which an employee can more easily maximize their self-interest.

We follow Aydinli et al. (2014) in proposing a dual process model of implicit and explicit motivations, using the same fundamental assumption that contextual elements will influence the extent to which E-PRO and I-PRO work together rather than independently. We believe that our work improves upon their dual-process model to the extent that we introduce a validated, systematic, and replicable measure of I-PRO with our prosocial IAT. We posit that I-PRO will moderate the relative stability of E-PRO under varying performance expectations. Therefore, where E-PRO is expected to be more susceptible to crowding, I-PRO is likely to suppress the crowding effect of self-interest on E-PRO when I-PRO is high. When an individual's I-PRO is low, that subject's E-PRO is likely to be more variable under different work contexts relative to the opportunity to maximize self-interest.

> ***H3:*** *Explicit prosocial motivation will be more susceptible to crowding than implicit prosocial motivation when material self-interest can be maximized (i.e., easy performance regime).*

> ***H4:*** *Implicit prosocial motivation will moderate explicit prosocial motivation under conditions in which self-interest can be maximized (i.e., easy performance regime).*

In other words, subjects with higher scores of I-PRO will be less susceptible to crowding when E-PRO is also high, whereas crowding will be more

likely when I-PRO is low and the subject is in the control group (50th percentile performance expectation), where self-interest is more easily maximized than in the treatment group (difficult regime; 99th percentile performance expectation).

Method

Sample and procedures

We recruit workers from the United States from Amazon's Mechanical Turk (MTurk). MTurk is an online labor market where people complete short, "one-shot" tasks for pay. Subjects complete our task for a normal market rate.[1] To reinforce the quality of our data, we selected only U.S. participants with an approval rating of 95% or above on their prior tasks. Additionally, they must have performed at least 1,000 tasks in the past (Wayne, Butts, Casper, & Allen, 2017).

The MTurk environment is an ideal platform for the type of experiment we run—especially because we would like to protect from the potential that self-interest is masked as prosocial behavior through a subject's reputational concerns. As Chandler and Kapelner (2013) succinctly argue:

> … the MTurk environment is a spot market for labor characterized by relative anonymity and a lack of strong reputational mechanisms. As a result, it is well-suited for an experiment involving the meaningfulness of a task since the variation … regarding a task's meaningfulness is less affected by desires to exhibit prosocial behavior or an anticipation of future work (career concerns). (p. 124)

Additionally, as Stritch, Pedersen, and Taggart (2017) note, Mturk can serve as a useful tool for measurement refinement *and* for experiments of the kind we mount in the current study and, more generally, that it provides public administration scholars an accessible tool for carrying out "basic proof of concept" studies before collecting data from practicing public managers. It does this by providing researchers with a cost-efficient way to reach a large and diverse subject pool, something public administration researchers might not otherwise be able to do.

Of course, Mturk is not without its limitations. Perhaps the most important of these is a potential lack of contextual realism. We are interested in work motivation and work behavior, but we are observing these things in an artificial environment. Whether our results would hold in the real world is an empirical question that we cannot answer here. Nevertheless, we believe that the Mturk platform allows us to perform informative tests of basic theory and in doing so provide the public management research community with useful knowledge regarding the constructs we are studying. Just as aeronautical engineers test scaled-down model airplanes in wind

Table 1. Descriptive Statistics.

	M	*SD*	*Min*	*Max*
Age	33.08	9.20	19	69
	Freq.	%		
Gender Expression				
Male	209	45.14		
Female	254	54.86		
Education				
High school/GED	56	12.10		
Some college	119	25.70		
2-year college degree	45	9.72		
4-year college degree	194	41.90		
Post-graduate	49	10.58		
Race				
White	366	79.05		
African American	27	5.83		
Latino	33	7.13		
Asian	27	5.83		
Native American	2	0.43		
Other	8	1.73		
Party ID				
Republican	66	14.25		
Democrat	215	46.44		
Independent	165	35.64		
Other	17	3.67		
Ideology				
Extremely liberal	50	10.80		
Liberal	128	27.65		
Slightly liberal	97	20.95		
Moderate	101	21.81		
Slightly conservative	34	7.34		
Conservative	42	9.07		
Extremely conservative	10	2.16		
Haven't thought much about it	1	0.22		

Note: $n = 528$.

tunnels before committing resources to building the real thing, we hope to test our theory in a controlled environment before porting it to the field.

We recruited 528 subjects for our experiment. Descriptive demographics for our sample are shown in Table 1. By design, our subjects are performing a task that comprises a part of their respective workday. Due to the nature of the spot labor market in which we conducted this experiment, it is quite reasonable to assume that subjects' performance of the task is grounded in their material self-interest through direct remuneration. Additionally, our subjects have complete agency over the task they choose (i.e., whether ours or others are available in the MTurk market) and (once ours is selected) whether to continue the task for additional remuneration (or exit with the original remuneration). Thus, the one-time nature of the task in the Mturk market protects from both competing reputational effects and the likelihood that subjects will exhibit prosocial behaviors for reasons other than as a prosocial expression. It is important to note that prosocial motivation exists not only among public and nonprofit sector employees, but also among private sector employees. We did not restrict our sample to public and nonprofit employees. In fact, about a third of our subjects

report being employed in the private sector (exploratory analyses showed no differences in our results across the sectors).

Our research design has four sequential components, each of which is administered online: (1) an opening survey; (2) our Implicit Association Test; (3) a visual simple reaction time task (SRTT); and (4) a concluding survey. We describe each of these components in more detail below, noting here that the core component is the SRTT task.

The opening survey contains questions aimed at assessing subjects' explicit prosocial motivation and attitudes about a preselected group of five charitable organizations. The data collected from this survey are used to construct independent variables (described below) for our analysis. Once subjects have completed this survey, they are passed to an Implicit Association Test that we have designed specifically for our study.[2]

The Implicit Association Test (IAT) is commonly used in psychology, and increasingly in other social science disciplines, to measure individuals' implicit, or unconscious, attitudes. Implicit attitudes are typically contrasted with explicit, or self-reported (usually via a survey) attitudes. The former are typically believed to be more deeply ingrained and less susceptible to social desirability biases than the latter, and so may offer increased explanatory power in models of prosocial work behavior. Our purpose in using the IAT is to examine whether implicit prosocial motivation is a stronger predictor of prosocial behavior than explicit prosocial motivation.

Upon completing our Implicit Association Test, subjects are passed to the core component of our research design—a SRTT. Performance of this task requires subjects to keep their eyes focused on a "fixation cross" located in the center of their computer screen. At random intervals, a red dot flashes onto the screen. Subjects are instructed to press their space bar as soon as they see this red dot. Our SRTT is comprised of 20 total red dot flashes; the subjects' aim is to achieve as quick an average reaction time as they can over these 20 total dot flashes.

Measures

Dependent variable

The SRTT exercise is the core component of our research design because it provides a behavioral measure of prosocial work behavior. It does so by offering subjects an opportunity to repeat the task for a chance to win a $10 prize and telling them that they can split this $10 prize between themselves and a randomly assigned charity (1 of the 5 preselected charitable organizations asked about in our opening survey) however they like. For instance, they can keep $6 for themselves and allocate the remaining $4 to

the randomly assigned charity. Alternatively, they can keep all $10 and allocate $0 to charity and so on.

Thus, our dependent variable is the amount of money (out of $10) that subjects allocate to their randomly assigned charity. We view this as a "revealed preference" measure of prosocial behavior—because subjects can choose to keep as much of the $10 as they want, we are able to directly observe their prosocial behavior. By observing subjects' actual prosocial behavior, we construct a meaningful, externally valid test of our hypotheses. Our use of this measure follows considerable prior precedent in laboratory experiments that aim to measure prosocial behavior and related constructs (e.g., Andreoni, Harbaugh, & Vesterlund, 2010; Ben-Ner, Kramer, & Levy, 2008).

Treatment

Subjects win the $10 prize if they achieve a fast enough mean reaction time on our SRTT. We randomly assign subjects to one of two performance expectations: a "fast enough" mean reaction time is either 15 or 23 milliseconds (ms). Our purpose in randomly assigning subjects to either a modest performance goal (23 ms) or a difficult performance goal (15 ms) is to examine, among other things, whether prosocial work behavior depends on goal difficulty. Situational features have been the focus of significant observation in psychological and organizations research. Whether timing, social pressure, the nature of the task, or the target of prosocial behavior, the activation of prosocial motivation is found to be context-dependent (Levine, Prosser, Evans, & Reicher, 2005). In this experiment, we are interested in how a clear performance expectation can crowd out the effect of prosocial work behaviors when a subject can more easily attain the goal and maximize their self-interest.

In the prompt for the task, the subjects are made explicitly aware of the degree of difficulty for their assigned performance expectation, respectively. The 23-ms expectation is the 50th percentile of performance (functioning as a control), while the 15-ms expectation is the 99th percentile of performance on this task generally (functioning as a "difficult" performance expectation treatment).[3] The subjects are explicitly made aware of the relative performance difficulty (i.e., 50th or 99th percentile).

Our task has multiple potential rounds: If subjects do not achieve a fast enough mean reaction time—that is, if they do not achieve the mean reaction time goal to which they are randomly assigned—they are offered another opportunity to repeat the task for a $10 prize and are again told that if they win they can divide this $10 between themselves and a randomly assigned charity however they choose. At this point, they can change their allocation however they want. They can choose a more self-interested

allocation by keeping more of the $10 for themselves or they can choose a more altruistic allocation by giving more to their randomly assigned charity. Alternatively, they can leave their initial allocation unchanged.

If subjects again fail to achieve a fast enough mean reaction time, they are offered yet another opportunity to repeat the task. All told, subjects are given nine opportunities to repeat the task in hopes of winning the $10 prize, and so subjects can make up to nine total allocation decisions. Of course, subjects can choose at any time to quit—that is, they can choose to not repeat our task, thereby relinquishing the chance to earn a $10 prize.

We offer subjects nine opportunities to repeat the task because we surmise that their prosocial behavior (donation) will change as subjects repeatedly fail at our task. We expect that subjects will become less prosocial in their behavior—that is, they will elect to keep more money for themselves—as they repeatedly fail. Since subjects complete the task once and are then offered up to nine opportunities to repeat, our task has ten rounds in total. However, we find no discernible within-subject crowding as a function of failure.

It is useful to view the first round as a practice round and the subsequent nine rounds as real rounds. Our visual reaction time task ends if subjects: (1) achieve a fast enough mean reaction time (thereby earning our $10 prize); (2) quit (i.e., choose to not repeat); or (3) fail to win after repeating nine times. Subjects can also be disqualified from the experiment if they cheat at the SRTT by rapidly and repeatedly pressing the space bar to "game" their reaction time. Forty-three of our 528 subjects were disqualified. Once the task ends, subjects are passed to a concluding survey containing demographic questions and, for quitters, questions about why they chose to stop repeating our task.[4]

E-PRO

We measure explicit prosocial motivation (E-PRO) using four survey items from Grant (2008a). Subjects receive the prompt, "Why are you motivated to do your work?" They then respond to the following four items: (1) "Because I care about benefiting others through my work;" (2) "Because I want to help others through my work;" (3) "Because I want to have a positive impact on others;" and (4) "Because it is important to me to do good for others through my work." Response options for these items range from 1 = strongly disagree to 7 = strongly agree.

I-PRO

The Implicit Association Test is designed to measure the strength with which individuals unconsciously associate different categories. It

accomplishes this by instructing subjects to classify items representing these categories as quickly as possible while making as few mistakes as possible. The IAT is typically taken online, and so subjects classify items by pressing computer keys that map items to their categories.[5]

Implicit Association Tests that are designed to measure self-concepts typically pair the categories Me & They or Me & Not Me with two other categories that represent whatever construct is of theoretical interest. For example, Srivastava and Banaji (2011), who measure individuals' implicit collaborative self-concepts, pair Me and Not Me with Collaborative and Independent. Our version of the Implicit Association Test pairs *Me* and *They* with *Service* and *Profit*. Items representing the Me category are the words "I," "me," "myself," and "mine." Items representing the They category are the words "they," "them," "their," and "theirs." For the Service category, we used the words "compassion," "sacrifice," "duty," "give," and "helping." For the Profit category, we used the words "gain," "win," "money," "take," and "capitalize."

The IAT is composed of seven blocks, or rounds, two of which are crucial. In what we will call "Block A," Me & Service are paired on the left side of the subjects' computer screens while They & Profit are paired on the right side of the subjects' screens. In "Block B," Me & Profit are paired on the left side of the subjects' screens while They & Service are paired on the right side. (We randomly assigned the order in which subjects performed blocks A and B). We expect it will be easier for subjects with high levels of implicit prosocial motivation to classify items when Me & Service (and They & Profit) are paired than when Me & Profit (and They & Service) are paired. Consequently, subjects with high levels of I-PRO should classify items more quickly when Me & Service are paired than when Me & Profit are paired. Figures 1 and 2 show blocks A and B of our PRO IAT as they would appear on subjects' computer screens.

The practical contribution of the Implicit Association Test is its resistance to manipulation by test subjects. Presumably, researchers (and practitioners alike) would like to know the true level of a subject's prosocial motivation. However, subjects can misrepresent these motivations. This misrepresentation can be deliberate and cynical or it can be less intentional, the product of a social desirability pressure that would cause most individuals to inflate their expressed prosocial motivation. In either case, misrepresentation makes it difficult for researchers to evaluate whether subjects' expressions of prosocial motivation are authentic. Among the IAT's strengths are that it is resistant to "faking." Because it measures unconscious attitudes, it is difficult for subjects to lie on the IAT (Kim, 2003). For a more experiential understanding of the instrument, readers can access our IAT at http://www.managementexperiments.info.

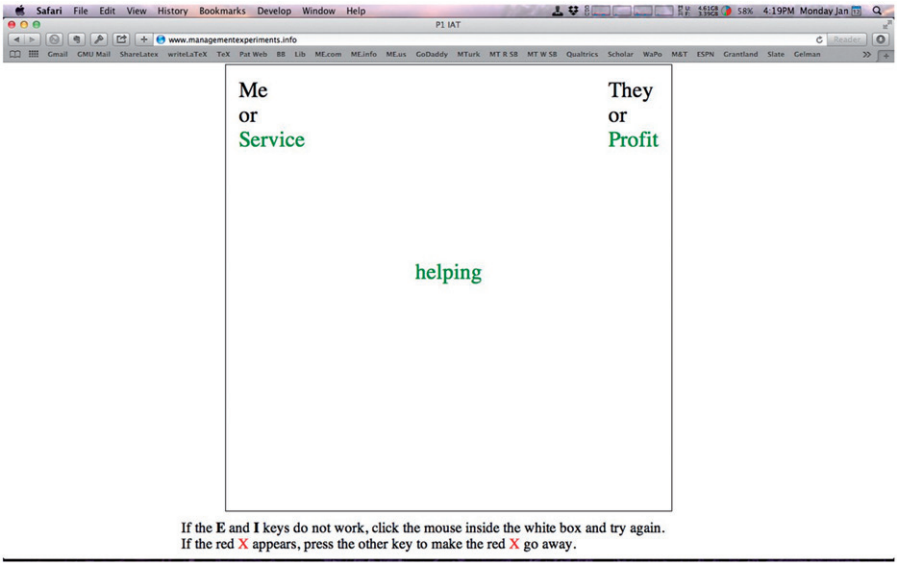

Figure 1. I-PRO IAT Block A. Notes: The I-PRO IAT's structure is the same as the Race IAT's structure. The I-PRO IAT differs from the Race IAT only in that it uses different categories. Here, Me & Service are paired on the left side of the screen while They & Profit are paired on the right side. The item that appears here is the word "helping," so the correct response would be to sort it to the left side of the screen by pressing the "E" key.

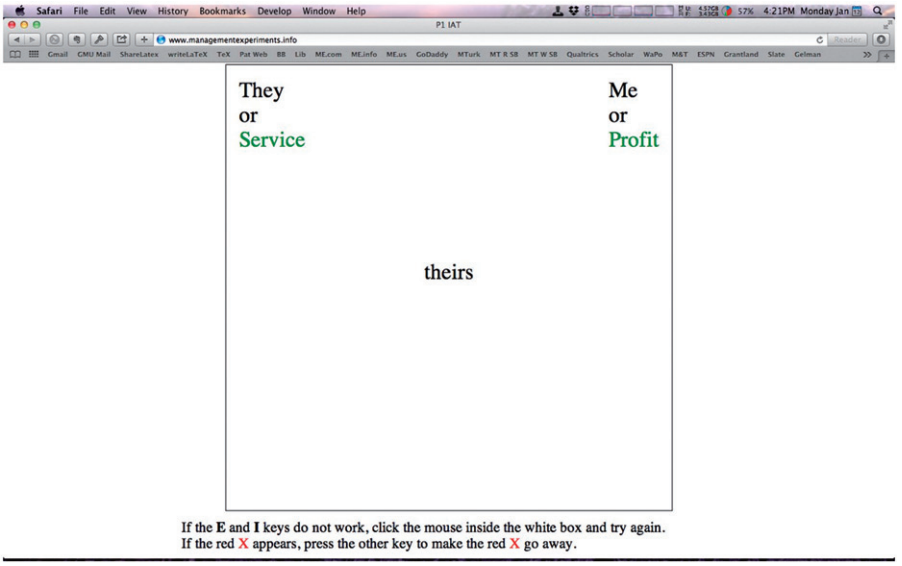

Figure 2. I-PRO IAT Block B. Notes: Now They & Service are paired on the left side of the screen while Me & Profit are paired on the right side. The item that appears here is the word "theirs," so the correct response would be to sort it to the left side of the screen by pressing the "E" key.

Mission match

As noted above, we ask subjects pretreatment questions about five preselected charitable organizations: the World Wildlife Fund, Amnesty

International, Doctors Without Borders, Habitat for Humanity, and the Special Olympics. Specifically, we display a summary of each of the organization's mission statements and then ask the following two questions in terms of (1) mission salience and (2) mission valence:

1. How important is the mission statement of [insert nonprofit organization] to you personally? I mean, how much do you personally care about this issue?
2. To what extent do you agree that the [insert nonprofit organization] is an organization that does good for society?

Response options for the first question range from 1 = "not important at all" to 7 = "extremely important." Response options for the second question range from 1 = "strongly disagree" to 7 = "strongly agree." We measure mission match using a subject's answers to these two questions—which we call mission salience and mission valence, respectively—for the charity to which the subject is randomly assigned and for which the subject is given the opportunity to potentially earn and donate money.

Results

We present three models of our analysis. The first models all subjects' prosocial behavior across rounds of our task—that is, the first to last round in which subjects are given the chance to earn a $10 prize—as a function of implicit and explicit prosocial motivation and mission match, with a three-way interaction among our two dimensions of prosocial motivation and the treatment (difficult performance) and a two-way interaction between mission match and the treatment. We then provide a full model, interacting each variable of interest with our treatment only. Finally, we provide a model with no interactions. The first model is the following:

$$\begin{aligned} donation_i = {} & \beta_0 + \beta_1 i\_prosocial_i + \beta_2 e\_prosocial_i + \beta_3 mission_i \\ & + \beta_4 tasks_i + \beta_5 difficult_i + \beta_6 i\_prosocial_i * e\_prosocial_i \\ & + \beta_7 i\_prosocial_i * e\_prosocial_i * difficult_i + \beta_8 mission_i * difficult_i \end{aligned}$$

where $donation_i$ is the amount of the potential $10 prize that subject i allocates to charity; $i\_prosocial_i$ is subject i's implicit prosocial motivation; $e\_prosocial_i$ is subject i's explicit prosocial motivation; $mission_i$ is the degree of subject i's mission match; $tasks_i$ is the number of tasks the subject performed; and $difficult_i$ is a dichotomous variable equal to 1 for those randomly assigned to the 99th percentile performance expectation. Table 2 outlines the descriptive statistics for the full sample and subsamples of

Table 2. Descriptive Statistics by Performance Regime.

		Easy					Difficult				
Variable	*Obs*	*M*	*SD*	*Min*	*Max*	*Obs*	*M*	*SD*	*Min*	*Max*	
Donation amount	981	1.738	2.087	0	10	832	1.983	2.384	0	10	
E-PRO	1,004	−0.059	1.012	−1.760	1.585	859	0.069	0.990	−1.760	1.585	
I-PRO	922	−0.053	0.933	−2.425	2.940	819	0.044	1.115	−4.236	3.914	
Mission match	1,004	−0.186	1.093	−3.764	1.077	859	0.167	0.945	−3.360	1.077	
Tasks performed	1,004	3.502	2.371	1	10	859	2.925	2.018	1	10	
Male	995	0.571	0.495	0	1	847	0.557	0.497	0	1	
African American	995	0.053	0.225	0	1	847	0.064	0.244	0	1	
Latino	995	0.046	0.210	0	1	847	0.084	0.277	0	1	
Asian	995	0.097	0.297	0	1	847	0.031	0.173	0	1	**
Native American	995	0.006	0.077	0	1	847	0.000	0.000	0	0	
Other	995	0.017	0.130	0	1	847	0.031	0.173	0	1	
Some college	995	0.290	0.454	0	1	847	0.272	0.445	0	1	
2-year college	995	0.070	0.256	0	1	847	0.117	0.321	0	1	
4-year college	995	0.414	0.493	0	1	847	0.380	0.486	0	1	
Post-graduate	995	0.121	0.326	0	1	847	0.076	0.264	0	1	**
30–39k income	995	0.152	0.359	0	1	847	0.189	0.392	0	1	
40–49k	995	0.108	0.310	0	1	847	0.128	0.334	0	1	
50–59k	995	0.120	0.325	0	1	847	0.103	0.304	0	1	
60–69k	995	0.049	0.216	0	1	847	0.070	0.255	0	1	
70–79k	995	0.074	0.263	0	1	847	0.066	0.249	0	1	
80–89k	995	0.052	0.223	0	1	847	0.034	0.182	0	1	
90–99k	995	0.031	0.174	0	1	847	0.034	0.182	0	1	
100–124k	995	0.054	0.227	0	1	847	0.050	0.217	0	1	
125k+	995	0.010	0.100	0	1	847	0.024	0.152	0	1	
Age	995	33.317	8.957	19	69	847	32.808	9.465	19	67	
Democrat	995	0.420	0.494	0	1	847	0.469	0.499	0	1	
Independent	995	0.357	0.479	0	1	847	0.377	0.485	0	1	
Other	995	0.082	0.275	0	1	847	0.012	0.108	0	1	
Liberal	995	0.277	0.448	0	1	847	0.282	0.450	0	1	
Slightly liberal	995	0.196	0.397	0	1	847	0.194	0.395	0	1	
Moderate	995	0.250	0.433	0	1	847	0.205	0.404	0	1	
Conservative	995	0.063	0.244	0	1	847	0.065	0.247	0	1	
Extremely conservative	995	0.102	0.302	0	1	847	0.085	0.279	0	1	
Don't know	995	0.024	0.154	0	1	847	0.032	0.176	0	1	
Goal distance	1,004	141.568	881.466	−171.25	25262.75	859	226.06	313.56	−56.75	6278.55	

Note: $^{**}p < 0.05$.

subjects in one of the two performance regimes, with correlations between the two subsamples for each variable.

As indicated in Table 2, there is no statistically significant difference between subsamples in any of our variables of interest. We find some differences in subsample populations only for Asian subjects and post-graduates. Given the small numbers of each, we have no reason to believe these differences make any substantive difference in our analysis. Nonetheless, we also ran robustness checks excluding observations with these characteristics, and we find no substantive difference from the models we present in Table 3. We use a generalized least squares (GLS) analytical approach to estimate our models. GLS enables us to account for the cross-sectional correlation among panels (i.e., each task attempted) and to fit models with autocorrelated errors (i.e., *within*-panel correlations). We provide GLS results for the variables of interest, with charity fixed effects.

Table 3. Generalized Least Squares Results.

Donation Amount ($)	(1) Full interaction model	(2) Interactions with performance regime only	(3) Full model (No interactions)
Number of tasks performed	−0.005	−0.00797*	0.002
	(0.004)	(0.00429)	(0.003)
Implicit prosocial motivation (I-PRO)	0.364***	0.413***	0.213***
	(0.036)	(0.0336)	(0.0264)
Explicit prosocial motivation (E-PRO)	0.223***	0.122***	0.276***
	(0.041)	(0.0329)	(0.0250)
E-PRO*I-PRO	−0.234***	.	.
	(0.037)	.	.
Difficult performance regime (Diff.)	−0.119**	−0.131***	−0.246***
	(0.047)	(0.0423)	(0.0492)
I-PRO*Diff	−0.140***	−0.162***	.
	(0.046)	(0.0472)	.
E-PRO*Diff	0.345***	0.390***	.
	(0.051)	(0.0438)	.
E-PRO*I-PRO*Diff	0.424***	.	.
	(0.051)	.	.
Mission match (MM)	0.389***	0.423***	0.502***
	(0.028)	(0.0246)	(0.0204)
MM*Diff.	0.233***	0.165***	.
	(0.034)	(0.0314)	.
n	1702	1702	1681
Wald χ^2	4266.45	4069.4	3884.96

Notes: Fixed charity effects in each model; Huber-White standard errors in parentheses.
*$p < 0.10$; **$p < 0.05$; ***$p < 0.01$.

As Table 3 shows, the four variables of interest are statistically significant across the entire population and in their interaction terms. We also report the coefficient for the number of tasks performed because we think it is important to reveal the relative substantive and statistical significance in this particular covariate, especially in lieu of the results for our main variables of interest.

As Table 3 indicates, the estimated effect of implicit prosocial motivation (I-PRO) on prosocial behavior is 0.21 without accounting for interactions, indicating that a standard deviation increase in I-PRO is associated with a 0.21 standard deviation increase in the amount a subject allocates to charity. The estimated effect of explicit prosocial motivation (E-PRO) on prosocial behavior is about 0.28. For a clearer sense of the magnitude of these coefficients, consider that the mean amount of money allocated to charity in the task across rounds is $1.85, with a standard error of $2.23. A standard deviation increase in I-PRO, then, is associated with an increase in money allocated to charity of about 47 cents (0.29 * 2.23). Viewed in relation to the mean donation amount, this 47 cents amounts to an approximately 25.3% increase (0.47/1.85). For E-PRO, the associated increase per unit is about 62 cents or an approximate 33.8% increase.

As Bozeman and Su (2014) illustrate, the relative usefulness of prosocial motives as an isolated explanatory variable can hardly be differentiated from other neighboring motivations when applied to efforts for

organizations with a prosocial mission or that deliver public goods. In addition, if we think of prosocial motivation as institutionally dependent and lacking sharp conceptual boundaries, then it is difficult for us to establish causal links (e.g., Waldner, 2012). Hence, we emphasize the corresponding effect of prosocial dimensions to mission advocacy on individuals' level of prosocial work behaviors as well as the relative stability of these motivations under different performance constraints.

In other words, if implicit prosocial motivation is automatic and we can exogenously impose mission match, will high levels of either more accurately predict prosocial behavior than how much subjects *say they are* prosocially motivated (explicit prosocial motivation)? As we discussed earlier, a subject may not explicitly state one's core motivation or inner self. Indeed, evidence in other areas of implicit motivations and biases shows that one can often state quite the opposite of how one is unconsciously "wired." Evidence suggests, for instance, that while individuals might explicitly profess themselves to be "team players," their implicit collaborative self-concept might be entirely different; and this implicit dimension more accurately predicts actual collaborative behavior (Srivastava & Banaji, 2011). In other words, implicit motivations or biases may yield more predictive value in our decision making and behavior.

We expect this to be true in terms of a difference in explicit prosocial motivation (E-PRO) and implicit prosocial motivation (I-PRO). Likewise, we believe that prosocial behaviors are to some degree institutionally dependent. In other words, the salience of a given issue to an individual and the valence that individual attributes to an organization that delivers a social good will determine one's prosocial behaviors on behalf of that organization (i.e., "restricted altruism"). For a more intuitive picture of the relative accuracy these variables have in terms of being stable predictors of prosocial behavior, we present Figures 3 and 4, which graph the polynomial functions of x in Model 1 (Table 3) on donation amounts, holding w and z at different levels. For instance, Figure 3 graphs the interaction between Mission Match and our treatment effect, holding both dimensions of prosocial motivation at their respective means. Figure 4 graphs the three-way interaction among E-PRO and I-PRO and the treatment effect. In other words, Figure 4 shows the relationship between E-PRO and donations when holding I-PRO at varying levels (–I-PRO $= \mu - \sigma\bar{x}$; +I-PRO $= \mu + \sigma\bar{x}$) in the two different performance regimes (Easy and Difficult).

We see, quite plainly, in Figure 3 that mission match is consistently and positively associated with meaningful donation amounts across subjects and performance regimes. While there is a statistically significant difference in the middle curves of both the easy and difficult performance regimes, the substantive difference is less significant. Conversely, explicit prosocial

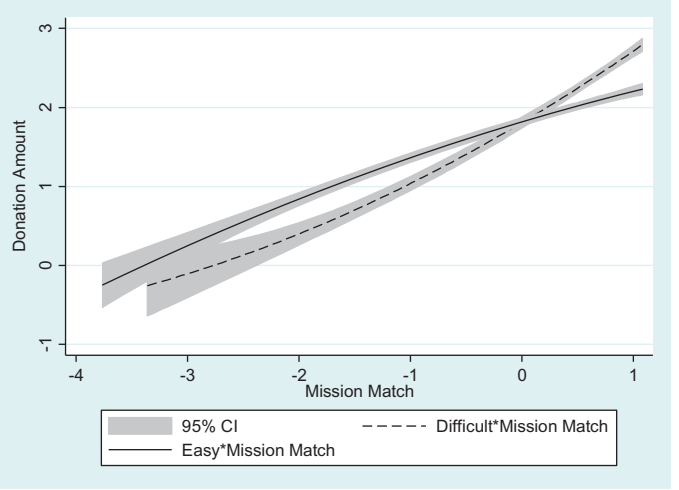

Figure 3. Donations as a function of mission match and performance expectations.

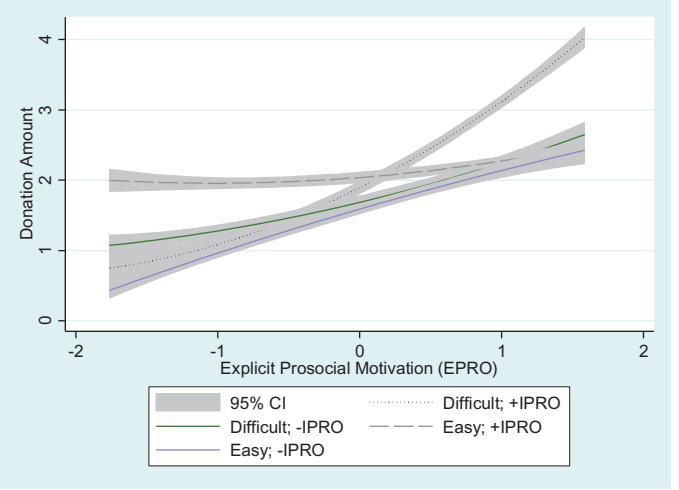

Figure 4. Donations as a function of E-PRO, I-PRO, and performance expectations.

motivation lacks consistency across performance regimes, but in an important way. E-PRO is associated with a substantively large increase in donation numbers in the difficult group when I-PRO is low, whereas E-PRO is associated with no statistically or substantively significant increase in donation amount when subjects are exposed to the easy performance regime. In other words, when E-PRO is lower and the subject can more feasibly maximize their self-interest through an attainable performance expectation, high levels of I-PRO work against what a person says about his self in terms of that individual's explicit prosocial self-concept.

High levels of I-PRO keep donation amounts stable across subjects in the Easy group from low to high E-PRO. Put differently, subjects' implicit

prosocial self-concepts—that is, the degree to which individuals unconsciously view themselves as prosocial—predict their actual prosocial behavior when their explicit self-concepts of prosociality are low and material self-interest *should* prevail. At the same time, when + I-PRO subjects are exposed to the Difficult group where there is not a feasible way that their material self-interest will be maximized, then there are higher donation amounts (relative to other scenarios) when E-PRO is also high. It is possible that social desirability bias is stronger when subjects are high in both E-PRO and I-PRO. In other words, *they want to be perceived as they are implicitly inclined and as said they are*—but only under conditions in which they cannot maximize their material self-interest.

Discussion

A few interesting insights emerge from our analysis. First, we provide convincing evidence of the value of the prosocial IAT for predicting prosocial work behaviors—especially as it concerns the consistency of the instrument across performance regimes. The explicit measure of prosocial motivation (E-PRO), while thoroughly validated through repetition in scholarly work (e.g., Bénabou & Tirole, 2005; Esteve, Urbig, Van Witteloostuijn, & Boyne, 2016; Grant, 2008b; Moynihan, DeLeire, & Enami, 2015), fails to provide a stable indicator across the varying performance expectations under which subjects are placed. This could be, in part, a function of social desirability bias. In other words, subjects are unlikely to answer questions about how they perceive their prosocial proclivities without some innate pressure to yield to what they deem to be a socially acceptable response. It is reasonable to assume that there are general social rewards and "warm glow" returns for being perceived as a person who wants to help other people (Andreoni, 1990). In addition, as we stated earlier, individuals are inclined to perceive themselves as having traits or motivations that are not associated with their true inner core, regardless of how they might perceive themselves.

Hence, when a person who states that she is prosocial is subjected to a performance expectation that is seemingly impossible to meet (i.e., 99th percentile), she has little incentive to reveal her true self-interest due to the unlikelihood of meeting the threshold necessary to maximize that self-interest. Therefore, her *ostensible* prosocial behavior is consistent with the *explicit* elicitations of her prosocial motivation. However, when the likelihood of reaping a reward is increased with a lower performance threshold (i.e., 50th percentile), self-interest is likely to crowd out E-PRO.

However, this crowding is conditional on the subject's implicit dimension of prosocial motivation. When I-PRO is high, this crowding effect *and*

potential social desirability bias effects are washed out. Our prosocial IAT accesses information about individuals' underlying motivational dispositions, as opposed to their current—and perhaps transitory—motivational states. Hence, the prosocial IAT adds explanatory power to existing models of work motivation. Currently, models do not account for implicit intrinsic work motivations. The prosocial IAT is a low-cost measurement tool, in terms of both time and money. It takes subjects only about 5–7 minutes to complete, and it does not require expensive proprietary software to implement (open-source IATs are freely available). Finally, the prosocial IAT is flexible. Researchers and practitioners can easily modify the categories and items that we used in our version; indeed, one fruitful avenue for future research would be to test the validity of different versions of the prosocial IAT.

We also find predictive validity and reliability in our mission match measure, and we offer a more nuanced experimental treatment than has been proffered in empirical studies of the influence of mission match. We accommodate the self-concordance and positive social impact a subject attributes to a given organization. Furthermore, the limited real-effort experiments with random organizational mission assignments use only two organizations. Whereas previous work on mission match tends to employ two diametrically opposed organizations (e.g., Brady Campaign and the National Rifle Association; Republican versus Democratic candidates in U.S. elections), we exploit a fuller range of potential substantive concerns to our subject pool. In addition, we introduce the treatment of varying performance regimes—a construct that has not been considered in studies of mission match.

Our results show that mission match clearly matters in motivating individuals toward prosocial work efforts in the face of varying performance expectations. Importantly, while mission match consistently predicts prosocial behavior across performance regimes, the *dimension* of intrinsic prosocial motivation matters. Perhaps the most interesting finding in our analysis is that individuals' implicit self-concepts matter in the sense that they have informational and predictive value under conditions of potential motivation crowding.

The Implicit Association Test is more resistant to faking and social desirability pressures than standard survey and interview approaches. While this provides us some traction in research as to the underlying mechanisms of motivation crowding, it may be difficult for managers to have a means of assessing implicit dimensions of prosocial motivation. (We suspect that administering an implicit association test, while logistically quite straightforward, may run into legal obstacles, particularly in highly formalized government personnel systems. Nonetheless, in principle it would be simple

for managers to collect information about employees' implicit prosocial motivation.) Rather, when managers have concerns over when prosocial motivation might be crowded out by other incentives, they might rely on the more readily identifiable construct of mission match. In other words, when prosocial work behavior is thought to be particularly important to an employee's task environment, one's professionalization, past work experience, and other proxies can be used to identify her relative orientation to the mission of the organization more so than how motivated she might say she is to help other people.

It is important to keep in mind that our study varies mission match exogenously, but in the real world it is common for individuals to self-select into organizations based on those organizations' missions. While our study therefore cannot speak directly to the question of what managers might do to cultivate employees' feeling of mission match, it is nonetheless important to consider this question in light of mission match's predictive value in our models. Helpfully, the public management literature provides some useful suggestions. Wright, Moynihan, and Pandey (2012) show that transformational leadership can foster mission valence by helping to clarify organizational goals for employees. More recently, Carton (2018) shows that high-level leaders can increase the sense of meaning employees extract from their daily work by repeatedly emphasizing how that work contributes to the overarching mission of their organizations. Taken together, these studies suggest that being clear about what exactly an organization's goals are and by conveying to employees how their work feeds into those goals will have salutary effects on work motivation. In short, clarity and linkage attempts can foster and capitalize on mission match to better motivate employees.

Conclusion and limitations

There are some activities in which humans engage that provide their own inherent reward (Deci, 1971), such that motivation for these activities is not completely dependent on external rewards. At times, extrinsic incentives may have an undermining effect on intrinsic motivations—commonly known as "motivation crowding" (e.g., Ariely, Bracha, & Meier, 2009; Benabou & Tirole, 2003; Bénabou & Tirole, 2005; Frey & Jegen, 2001). Deci and Ryan's (1975) classic study is a case in point. Their finding, later developed into cognitive evaluation theory (CET), suggests that "placing strong emphasis on monetary rewards is likely to decrease people's intrinsic interest, thus dampening a potentially powerful alternative source of motivation" (Rynes, Gerhart, & Parks, 2005, p. 575).

If managers are expecting prosocial motivations to translate to prosocial work behaviors, they must be cognizant of how the incentives they offer for a given task might moderate that relationship. Our findings suggest that how employees conceive themselves—in terms of how prosocial they might be—can be inconsistent with their behaviors. Moreover, it is these explicit self-concepts that are most easily crowded out under conditions in which an employee can maximize their material self-interest. This is neither a universally good or bad thing. Rather, it is important for managers to identify when employees' core motivations are consistent with what they say. People have self-concepts that are not always consistent with how they truly are. That does not mean that they are intentionally obfuscating these facts. Rather, how they perceive themselves to be is simply not the same as how they act in real life.

The gap between individuals' implicit and explicit self-concepts presents managers with a considerable challenge. How, exactly, can a manager hope to learn when employees' implicit motivations are in tune with their explicit motivations? Our view here is that an individual's prosocial motivation, as tapped by the Pro-IAT, is but one piece of information that a manager might collect about an employee in developing a fully formed picture of that employee's motivations and likely behaviors. An individual's answers to a standard batter of explicit prosocial motivation survey questions would be one more piece. Perhaps the most important piece, though, would be managerial observations of what an individual actually does on the job. Does the individual go beyond the call of duty in delivering services? Jensen and Vestergaard (2017), for instance, show that among Danish general medical practitioners, explicit public service motivation is related to the use of home visits, an "objectively measured" public service behavior (p. 53). Of course, objectively measurable public service behaviors will vary across work contexts, but identifying these behaviors and making some attempt to note how often employees engage in them could give managers one more piece of information about employees' work motivation. Importantly, research that examines how prosocial and public service motivation are related to objectively measurable real-world behaviors is an important complement to research like ours, that relies on lab data. Ultimately, we think managers and researchers will be best served by bringing as many different pieces of information as possible to bear on the problem of explaining work motivation.

Additionally, through relationship building and iterative transactions, managers can intuit how workers truly respond to various incentives. Additionally, managers can gain a clearer idea of how prosocially motivated a given employee might be by avoiding question frames that are vulnerable to social desirability bias. Nonetheless, new employees or new contexts

might present new combinations of incentives that can crowd out previously recognized or explicitly stated work motivations. It is critical for managers to balance incentives according to the task environment and recognize that such contingencies do not provide for a constancy of assumptions across tasks or employees.

From a practical standpoint, it is certainly difficult to randomly assign workers to organizations and the same is true in terms of mission match. In other words, individuals may be more implicitly oriented to an organization's mission than what they explicitly state. Nevertheless, just as the prosocial IAT can be a flexible tool for research and human resource practitioners, more proprietary mission-oriented IATs can be developed for respective organizations. Of course, any new IAT requires validation testing, as we exhibit (in part) here. Nonetheless, the possibility for specific mission-oriented IATs is evident through recent research (Marvel, 2016).

Additionally, our focus in this study is on the causal mechanisms of motivation crowding in prosocial work. In doing so, we risk losing important contextual elements that might also be important. For instance, job characteristics and peer environments have been shown to directly impact both organizational citizenship behaviors and prosocial motivations (Camilleri & Van Der Heijden, 2007). We acknowledge that the spot-labor nature of the MTurk environment is a significantly different form of work contract than what is performed in the public or nonprofit labor markets. As an experimental study, our focus is on the internal validity of our causal claims rather than the external validity. We argue that much work has been focused on the latter rather than the former, and our study helps correct for this imbalance and give clarity to the causal claims. Moreover, while we recognize that behavioral responses observed on our SRTT may not reflect real world workplace behavior, we believe that the extant empirical literature provides reason to be confident that government employees will be willing to surpass their baseline role expectations to help citizens, even when doing so comes at the expense of their material self-interest. For instance, recent data from the U.S. Department of Education indicates that during the 2014–2015 school year, fully 94% of public school teachers spent their own money on classroom supplies without reimbursement. On average, these teachers spent $479, a nontrivial sum. [6] The street-level bureaucracy literature provides many more examples of this kind of altruistic behavior, in which front-line employees behave in ways that aren't materially self-interested (e.g., Dilulio, 1994; Maynard-Moody and Musheno, 2003).

Finally, there exist strong empirical and theoretical arguments against some uses of the IAT as a measurement instrument, especially regarding its strength in explaining actual behavior (e.g., Blanton et al, 2009; Oswald, Mitchell, Blanton, Jaccard, & Tetlock, 2013). Moreover, as we demonstrate,

it is important not to rely solely on implicit measures, just as it is critical that we are careful with our interpretations of stated preferences or motivations. We argue that more recognition of the dual process model of implicit and explicit motivations is a promising path forward. We also encourage researchers to use variations of a similar design in which the precepts of mission match theory, dimensions of prosocial motivations, and related intrinsic motivations are tested under randomly assigned treatments such as performance expectations, monitoring, and performance feedback frames. The present analysis provides a nascent attempt at unpacking some of these mechanisms. A surfeit of questions concerning the importance of these intrinsic motivations and their respective implicit dimensions remain.

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Notes

1. For more information on ethical pay in the MTurk market, see http://wiki.wearedynamo.org/index.php?title=Fair_payment#What_is_ethical_pay_for_Turkers_in_studies.3F.
2. See Appendices B and C for the front- (B) and back-end (C) components of our survey instrument.
3. Percentiles were determined through average performance for the same task using a past experiment of over 600 subjects by the authors using the same task.
4. At this point, it is important that we address why we chose this particular task as the basis for our experiment. First, the task has been validated as a mundane work task in past experiments (e.g., Kjellberg et al., 1996; Steel, Silson, Stagg, & Baker, 2016). Second, because it is sufficiently dull enough to protect from any potential

entertainment value intrinsic to the task itself, we think it is unlikely that a process of diminishing entertainment utility is at work in our experiment. To test the potential for intrinsic entertainment value, we asked subjects in a post-task questionnaire why they decided to quit. More specifically, we provided subjects with a variety of potential reasons for quitting and asked them to select all the reasons that applied to their decision. Subjects selected from among the following response options:

1. "I just didn't feel like doing it again."
2. "I felt like it would be too difficult to achieve a quick enough average reaction time."
3. "I don't have enough time to spend extra time on HITs."
4. "I didn't like the charity I could have played for."
5. "I could be doing other HITs."
6. "The task was boring."
7. "I didn't believe you would actually donate money on my behalf."
8. "I actually achieved a quick enough reaction time task to earn money for charity."
9. "Other."

If diminishing entertainment utility was a factor, we should expect option 6—that the task was boring—to be a common choice; only 5 subjects selected this choice. The most frequent response was option 2, with 230 subjects selecting it. This suggests an unwillingness to persist in the face of frustration was more a reason for subjects' quitting decisions than diminishing entertainment value. The idea that the entertainment value of our task might affect subjects' willingness to persist is related to the notion of "procedural utility," described at length in Frey et al. (2004), who note that "procedural utility means that people not only value actual outcomes, i.e., the what, but also the conditions and processes that lead to these outcomes, i.e., the how" (p. 377). We underscore this point here because it is possible that a different task might yield different results, if the "how" of that different task affected subjects differently than the "how" of our task. An interesting question for future research would be to investigate how varying levels of procedural utility might either promote or inhibit prosocial motivation.

5. A variety of IATs are hosted at https://implicit.harvard.edu/implicit. Readers can navigate to the site and complete as many as they like.
6. See https://files.eric.ed.gov/fulltext/ED583062.pdf.

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