

GOAL SETTING AS A MOTIVATOR OF UNETHICAL BEHAVIOR

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We explored the role of goal setting in motivating unethical behavior in a laboratory experiment. We found that people with unmet goals were more likely to engage in unethical behavior than people attempting to do their best. This relationship held for goals both with and without economic incentives. We also found that the relationship between goal setting and unethical behavior was particularly strong when people fell just short of reaching their goals.

A substantial literature has documented the benefits of setting goals. In general, people exert more effort and work more persistently to attain difficult goals than they do when they attempt to attain less difficult goals or to “do their best” (Locke & Latham, 1990). This relationship is so strong that goal setting has become an important part of motivation theory and management education (Ambrose & Kulik, 1999). In fact, Locke and Latham (1990) contended that goal setting might be the most effective managerial tool available.

In several organizational settings, however, the use of goal setting has been associated with “cooked books” and false sales reports (e.g., DeGeorge, Patel, & Zeckhauser, 1999; Jensen, 2001). In this work, we identify an important, unintended consequence of setting goals. Our results demonstrate that, in addition to motivating constructive effort, goal setting motivates *unethical* behavior when people fall short of their goals. We argue that while goal setting can be used constructively, it must also be used cautiously.

BACKGROUND AND HYPOTHESES

Limitations of Goal Setting

The goal setting literature has carefully examined the relationship between goal setting and task per-

formance. Locke and Latham (1990) reviewed nearly 400 goal setting studies. The vast majority of these studies focused on the beneficial effects of setting specific, challenging goals (for example, sell 50 magazine subscriptions) rather than vague goals lacking specific targets (for example, do your best). Results from this work offer a firm foundation for the claim that, relative to vague goals, specific, difficult goals increase performance across a range of domains including both cognitive tasks (such as solving anagrams and puzzles and creating lists of creative uses for an object) and physical tasks (such as doing sit-ups, sewing, drilling, welding).

A few studies, however, have identified conditions under which goal setting (that is, setting a specific, challenging goal) does not boost productivity (Shapira, 1989; Wood, Mento, & Locke, 1987). For example, Hollenbeck and Klein (1987) found that goal setting did not improve performance when individuals failed to adopt the goal. Similarly, goal setting did not increase productivity for certain complex tasks (Earley, Connolly, & Ekegren, 1989). In these cases, difficult goals may discourage experimentation and ultimately curtail productivity. In other cases, goal setting may not achieve underlying objectives because the specific goals are defined too narrowly (Staw & Boettger, 1990; Tenbrunsel, Wade-Benzoni, Messick, & Bazerman, 2000). For example, in negotiation studies the use of challenging goals has boosted individual performance (Northcraft, Neale, & Earley, 1994) but harmed joint profit (Huber & Neale, 1987).

All of this prior work has focused on the relationship between goal setting and task performance. In this work, we considered a very different type of problem that goal setting can cause. Rather than

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focusing on task performance, we investigated the role of goal setting as a motivator of unethical behavior.

Ethical Decision Making

We considered the influence of goal setting within a framework of ethical decision making. Although a number of models of ethical decision making have been advanced (Grover, 1993; Jones, 1991; Lewicki, 1983; Treviño, 1986), one model that has particular relevance to our work is Lewicki's (1983) model of deception. In this model, a decision to use deception (a deception decision) is the product of a decision maker's perceptions of the costs and benefits of using deception. Importantly, this model allows for potential *misperceptions*. In particular, Lewicki (1983) speculated that people underestimate the costs of using deception because they justify their own use of deception too readily to themselves. In keeping with Lewicki's (1983) model, we considered the role of perceptions in the ethical decision making process, but we departed from previous work in ethical decision making by considering the role of goal setting in altering perceptions of the *benefits* of engaging in unethical behavior.

Prior work has identified a number of important factors that influence ethical judgment and behavior (see Ford and Richardson [1994] and Loe, Farrell, and Mansfield [2000] for reviews). Most of these studies have focused on the influence of individual factors, such as nationality (Lewicki & Robinson, 1998), gender (Ambrose & Schminke, 1999; Robinson, Lewicki, & Donahue, 2000; Schminke & Ambrose, 1997), and personal characteristics, such as an individual's concern for self-presentation (Covey, Saladin, & Killen, 1989), stage of moral development (Treviño & Youngblood, 1990), and ethical framework (Schminke, Ambrose, & Noel, 1997). A number of other studies, however, have identified important contextual and organizational factors, such as ethics training (Delaney & Sockell, 1992), the use of codes of ethics (Treviño & Youngblood, 1990; Weaver, Treviño, & Cochran, 1999), and the use of incentives (Flannery & May, 2000; Hegarty & Sims, 1978; Schweitzer & Croson, 1999; Tenbrunsel, 1998; Treviño & Youngblood, 1990). In this paper, we describe the influence of a common managerial tool, goal setting, on unethical behavior.

Goals and Ethical Behavior

Our assumption that people make ethical decisions by weighing the perceptual costs and benefits

of engaging in unethical behavior is consistent with Lewicki's (1983) model. We consider the role of goal setting in this process. Prior goal setting work suggests that the presence of a goal increases arousal, focuses attention, and creates a psychological reward for attaining the goal (Gellatly & Meyer, 1992; Gollwitzer & Schaal, 2001; Heath, Larrick, & Wu, 1999). According to Bandura's (1991) social cognitive theory, goal attainment is associated with psychological rewards, including positive self-evaluations and higher self-satisfaction. We believe that people derive similar psychological rewards from claiming to have reached a goal, and incur psychological costs from admitting goal failure. Whereas prior goal setting work has focused on psychological factors as motivating constructive effort as people work toward goals, we considered psychological factors as motivating unethical actions *after people fall short* of goals. In particular, we expected people with unmet goals to be more likely to misrepresent their performance than people without specific goals.

Hypothesis 1. People with specific, unmet goals will be more likely to overstate their performance than people without specific goals (such as people attempting to "do their best").

In this work, we considered two types of goals: reward goals and mere goals (Heath et al., 1999). *Reward goals* involve discrete, economic benefits (for example, you win a trip to Hawaii for selling 30 cars); *mere goals* involve no discrete economic benefits (for example, you have the personal goal of running five miles today). In keeping with our first hypothesis, we expected both types of goals to induce a psychological benefit that will influence ethical behavior. In addition to psychological incentives, reward goals also contain economic incentives. Using Lewicki's (1983) framework, we expected the perceived benefits of engaging in unethical behavior to be greater for people with reward goals than they would be for people with mere goals. Thus, we expected reward goals to exert more influence on ethical behavior than mere goals.

Hypothesis 2. People with unmet reward goals will be more likely to overstate their performance than people with unmet mere goals.

We next consider the relationship between proximity to a goal and unethical behavior. We expected people who failed to reach a goal by a small amount to be more likely to overstate their performance than people who failed to reach the goal by a large amount for two reasons. First, the psychological costs of engaging in small unethical behav-

iors are likely to be lower than the psychological costs of engaging in large unethical behaviors. By design, participants in our experiment faced no economic or social costs for their unethical acts; participants' actions were completely anonymous. Our participants, however, may have incurred psychological costs, such as negative self-perceptions, for engaging in unethical behavior. These psychological costs were determined by the nature of the unethical acts themselves and by the decision makers' abilities to justify their own actions. Prior work has shown that small unethical actions are easier to justify than large unethical actions (Schweitzer & Hsee, 2002). Given this finding, we expected individuals who were close to achieving their goals to justify making false claims of reaching the goals (overstating their performance by a small amount) more readily than individuals who were very far from achieving their goals. Consequently, we expected the psychological costs of small overstatements to be lower than the psychological costs of large overstatements. These lower costs, according to Lewicki's (1983) model, will increase the likelihood that people will engage in unethical behavior.

The second reason we expected proximity to a goal to matter involves the psychological costs of admitting goal failure. We expected the psychological costs of admitting having missed a goal to be *higher* when people missed the goal by a small amount than when they missed it by a large amount. Prior work investigating the construction of "counterfactuals" (that is, imaginary accounts) has shown that people who miss an outcome by a small amount of time (for example, miss a flight by two minutes) invoke more counterfactuals than people who miss an outcome by a large amount (miss the flight by two hours) (Johnson, 1986; Kahneman & Tversky, 1982; Kahneman & Varey, 1990). In the goal setting domain, these results suggest that people who miss their goals by a small amount are more likely to generate a salient counterfactual of reaching the goal than are people who miss their goals by a large amount. This argument suggests that the psychological costs of admitting goal failure will be larger for people who miss goals by a small amount than they are for people who miss goals by a large amount.

Hypothesis 3. People who fail to reach their goals by a small margin will be more likely to falsely claim to have reached their goals than people who fail to reach their goals by a large margin.

METHODS

Sample and Materials

Several studies have used anagram tasks to study goal setting behavior (Locke & Latham, 1990), and in our experiment we used a modified version of Vance and Colella's (1990) anagram task. We adapted this task to examine the link between goals and unethical behavior. Unlike prior anagram studies, our study had participants not only list words, but also check their own work. This latter part of the study afforded participants an opportunity to misrepresent their performance.

Before we conducted the experiment, we recruited 70 participants for a pilot study. These participants were given one minute to create words using seven letters listed at the top of a page. The first page of the experimental instructions contained the following rules: "Each word must be an English word, two or more letters long, other than a proper noun, made by using each of the 7 letters only once per word, and used in only one form." Our pilot participants performed this word creation task nine times with different combinations of letters, and we used results from this pilot study to identify our performance goal. As in prior goal setting work (e.g., Latham & Seijts, 1999), our goal was set equal to the 90th percentile of performance; in this case we selected a goal of creating nine words in each round.

We then recruited 154 undergraduate participants via class announcements and campus flyers for a study in decision making. Most participants were male (61.9%), and most of them identified their first language as English (79.1%). On average, participants were 20.0 years old.

Procedures

We asked our participants to do the same word creation task our pilot participants had completed and to check all of their work at the end of the experiment. The experiment began with two practice rounds. For each practice round, participants were given one minute and asked to "create as many words as you can." The practice rounds were designed to familiarize participants with the experimental procedure. Next, participants were asked to complete seven experimental rounds. For each experimental round, they were given seven letters and one minute to create words. After the last experimental round, participants completed a final round, which contained a unique set of letters for each participant that we used to match participants' workbooks with their answer sheets. The participants then answered postround demo-

graphic questions regarding their gender, age, and first language.

After the practice rounds and before the experimental rounds, each participant was exposed to instructions that established one of three treatment “conditions.” In the *do-your-best* condition, participants were told to “do your best to create as many words as you can” on the following seven experimental rounds. In the *mere goal* condition, participants were given the goal of creating nine or more words for each round. The specific instructions were:

It is important that you commit to a specific yet attainable goal. *Your goal is to create 9 words during the allotted 1 minute using these 7 letters. This goal is difficult, but realistic. In previous studies many students were able to create 9 or more words per round using the same groups of letters you are about to see.*

In the *reward goal* condition, participants were given the goal of creating nine words for each round and told that they would earn \$2 for each round in which the goal was met.

All participants were given cash at the start of the study. Do-your-best and mere goal participants were each paid \$10. Reward goal participants were each given an envelope that contained 14 one-dollar bills. Participants in the reward goal condition were told to keep \$2 for each of the seven experimental rounds in which they met the goal and to return unearned money in their envelopes with their answer sheets.

We also asked both reward and mere goal participants questions after the practice rounds and before their experimental rounds to gauge goal commitment. Goal commitment is defined as an unwillingness to abandon or lower a goal (Campion & Lord, 1982) and has been closely linked to performance (Renn, Danehower, Swiercz, & Icenogle, 1999). We adapted the goal commitment questions from Hollenbeck, Williams, and Klein (1989) and found the scale to be reliable (mere goal participants, $\alpha = .78$; reward goal participants, $\alpha = .83$).

In the second stage of the experiment, we asked participants to check their own work. Participants were offered Scrabble® dictionaries and reminded of the rules for creating words. An answer sheet, which was separate from the workbook, asked each participant whether or not he or she had created nine or more valid words in each round. Specifically, for each round a participant checked one of two boxes to indicate whether or not he or she had created nine or more words. There was no time pressure for completing this stage of the experiment. Participants were recruited for a one-hour

experiment and always had at least 25 minutes to complete this second stage. When participants were finished, they deposited their workbooks and answer sheets in separate sealed boxes. Their workbooks contained the words they created and their responses to the pre- and postround questions. Their answer sheets contained their claims regarding whether or not they had created nine or more words. Reward goal participants had envelopes in which to deposit unearned money along with their answer sheets.

Because of the nature of the experiment, we took extra care to give participants a sense of anonymity. Each experimental session had 20 or more participants, and we reminded participants throughout the experiment not to put their names on either their workbooks or answer sheets. Once the experimental trials were completed and before the participants corrected their responses, the experimenters left the room so that the participants would feel anonymous. We also had participants place their workbooks and answer sheets in separate sealed boxes to ensure anonymity and prevent the experimenters from detecting any misrepresentations during the experiment.

Unbeknownst to participants, the experimental materials did contain a mechanism for matching workbooks with answer sheets. The letters used in the eighth trial were unique to each participant; since these letters were included on both the answer sheet and the workbook, we were able to match the two sets of responses. Even though we had the ability to match answer sheets and workbooks, participants remained anonymous since we were unable to match individuals with their responses.

Finally, the method of payment also ensured participants' anonymity. Those in the do-your-best and mere goal conditions received \$10 each before the experiment began. This payment was completely unrelated to performance. Those in the reward goal condition received envelopes containing dollar bills at the start of the experiment and paid themselves by taking money from their envelopes. Reward goal participants were asked to return unearned money along with their answer sheets in sealed envelopes and to deposit their sealed envelopes in a sealed box. No participant in the reward goal condition signed a payment form since this could have revealed identifying information.

We measured unethical behavior in our study by coding the congruence between participants' actual productivity and the claims they made about their productivity. For each participant, we categorized claims for each round as either: (1) an accurate report of meeting the goal (created nine or more

words and claimed to have created nine or more words), (2) an understatement of productivity (created nine or more words, but claimed to have created fewer than nine words), (3) an overstatement of productivity (created fewer than nine words, but claimed to have created nine or more words), or (4) an accurate report of missing the goal (created fewer than nine words and claimed to have created fewer than nine words). Note that participants in the do-your-best condition were not actually given an explicit goal, but they did report on their answer sheets whether or not they had created nine or more words in each round.

We were interested in the relationship between goal failure and unethical behavior, and as a result we focused our attention on overstatements. For each participant, we computed an overstatement score to represent the fraction of times he or she overstated productivity relative to the number of times he or she missed the goal (and thus had the opportunity to overstate productivity). These scores ranged from 1, indicating a participant overstated productivity every time he or she had the chance to do so, to 0, indicating a participant never overstated productivity. For example, consider a participant who created fewer than nine words in six of the seven rounds. If this participant claimed to have created nine or more words in two of these six rounds, his or her overstatement score would equal 0.33 ($= 2/6$). To test our directional hypotheses, we compared overstatement scores and the percentages of participants who made overstatements across conditions using one-sided tests of significance.

The overstatement behavior we observed in this experiment has direct organizational analogs. For example, many associates in law and accounting firms are asked to self-report the number of hours they worked. In some cases, associates have significant incentives to overstate their performance.

The behavior we investigated is also representative of deceptive behavior more generally. Our measure of unethical behavior is consistent with Bok's definition of a lie as "any intentionally deceptive message which is stated" (1978: 13). In our experiment, all the claims participants made were written, and hence they constituted active rather than passive misrepresentations (that is, commissions rather than omissions). Most overstatements in our study were also intentional. We believe this to be true for three reasons: First, the reporting task was a straightforward counting task, particularly for the participants assigned goals, for whom the first nine lines on each page of the workbook were numbered and boxed. Second, all participants had ample time to complete the counting and reporting

task. Third, we found a systematic pattern of overstatements that cannot be attributed to random error. We describe this pattern of results in the following section.

RESULTS

We conducted separate regression analyses to test the relationship between demographic variables (gender, age, and native language) and performance, measured as the average number of words listed, the average number of valid words created, and whether or not participants overstated their productivity. We found no significant relationships between the demographic variables we collected and participants' performance, and as a result we combined data from the different demographic groups for the remainder of the analyses.

Table 1 represents productivity results for the three conditions. We found that participants in the reward goal and mere goal conditions created more valid words than did participants in the do-your-best condition, 6.17 and 5.83 versus 5.46; however, the difference between these values was not statistically significant ($F[2, 151] = 2.16, p = .12$). In our discussion section, we consider aspects of our experimental design, such as time pressure, that are likely to have muted the relationship between goal setting and productivity.

Hypothesis 1 predicts that people with unmet goals will be more likely to overstate performance than people in the do-your-best condition. Supporting this hypothesis, the average overstatement score for participants in the goal conditions, 0.11, was significantly higher than the average overstatement score for participants in the do-your-best condition ($0.03; t[152] = 2.48, p = .007$). In separate analyses, we found that the average overstatement score for reward goal (0.13) and mere goal participants (0.08) were each significantly higher than the average overstatement score for do-your-best participants ($t[108] = 2.85, p = .003$ and $t[99] = 1.76, p = .041$, respectively).

We next investigated the source of the increased proportion of overstatements in the goal conditions. Specifically, we examined the extent to which the higher proportion of overstatements in the goal conditions was due to an increase in the *number of individuals* who overstated their productivity or to an increase in the *number of cases* caused by similar numbers of individuals. First, we examined the percentages of participants who overstated their productivity in at least one round. Of the do-your-best, mere goal, and reward goal participants, 10.5, 22.7, and 30.2 percent respectively overstated productivity at least once. In paired

TABLE 1
Productivity Results by Round and Treatment Condition^a

Round and Available Letters	Valid Words Created						Percentages of Participants . . .					
	Do Your Best		Mere Goal		Reward Goal		Who Actually Met the Goal			Who Claimed to Meet the Goal		
	Mean	s.d.	Mean	s.d.	Mean	s.d.	Do Your Best	Mere Goal	Reward Goal	Do Your Best	Mere Goal	Reward Goal
1: AEDBKUG	6.09	2.3	5.84	1.8	6.79	2.3	17.5	9.1	30.2	21.1	11.4	37.7
2: OELBJAM	5.19	2.3	5.41	2.4	5.83	2.4	8.8	13.6	18.9	7.0	18.2	28.3
3: UADQWER	5.11	2.3	6.00	2.0	5.79	2.5	8.8	13.6	17.0	10.5	18.6	25.0
4: EASCKIY	5.74	2.2	5.89	2.1	6.28	2.1	12.3	11.4	18.9	14.0	18.2	34.0
5: OADMHUP	7.04	2.7	7.57	2.5	8.11	2.6	26.3	29.5	52.8	26.3	36.4	56.6
6: OELHMAZ	5.00	2.4	5.64	2.5	5.92	3.2	8.8	9.1	26.4	10.5	11.4	37.7
7: OASFKEV	4.09	1.9	4.50	2.0	4.40	2.4	1.8	4.5	5.7	5.3	9.1	13.2
Average	5.46	1.8	5.83	1.6	6.17	1.9	12.0	13.0	24.3	13.5	17.7	33.3

^a For the do-your-best condition, n was 57; for the mere goal condition, n was 44; for the reward goal condition, n was 53.

comparisons, the differences between proportions for participants in the reward goal and do-your-best conditions and the proportions for participants in the mere goal and do-your-best conditions were significant ($\chi^2[1, n = 110] = 6.64, p = .005$, and $\chi^2[1, n = 101] = 2.77, p = .048$, respectively). Second, we examined the number of times participants overstated their productivity. Counting only those who overstated productivity at least once, we found that the average number of overstated rounds (with standard deviations) in the do-your-best, mere goal, and reward goal conditions were 1.5 (0.84), 1.4 (0.70), and 2.25 (1.8). In paired comparisons, none of these values were significantly different from each other. Taken together, these findings indicate that goal setting increased the number of participants who overstated their productivity rather than the number of cases caused by similar numbers of individuals.

Hypothesis 2 predicts that people with unmet reward goals will be more likely to overstate performance than people with unmet mere goals. Though in the predicted direction, the average overstatement score for participants in the reward goal condition, 0.13, was not significantly higher than the average overstatement score for participants in the mere goal condition (0.08; $t[95] = 0.98, p = .17$). Similarly, the difference between the proportions of participants who overstated productivity in the reward and mere goal conditions was not significant ($\chi^2[1, n = 97] = 0.68, p = .20$). Thus, we did not find support for Hypothesis 2. Participants were not significantly more likely to overstate productivity in the reward goal condition than they were in the mere goal condition.

Hypothesis 3 predicts that people who fail to reach their goals by a small margin will be more likely to falsely claim to have reached their goals than people who fail to reach their goals by a large margin. We tested this hypothesis by examining the relationship between proximity to a goal and the likelihood of overstating productivity. In this analysis we only considered participants in the goal conditions, and we examined only rounds in which participants created fewer than nine valid words and hence had the opportunity to overstate their productivity. When participants created fewer than nine words, they either accurately reported missing the goal or overstated their productivity. For each participant who overstated at least once and accurately reported missing the goal at least once, we calculated the average number of valid words they had actually created in both types of rounds. This procedure created two scores for each individual, productivity in accurately reported rounds and productivity in overstated rounds, which we used in paired t -tests. Supporting our third hypothesis, participants created an average of 5.00 words in accurately reported rounds and 7.46 words in overstated rounds ($t[21] = 9.33, p < .001$). In fact, participants in the goal conditions were most likely to overstate their productivity when they had created eight valid words. The cases in which eight valid words were created illustrates this pattern. The do-your-best, mere goal, and reward goal conditions respectively contained 27, 29, and 33 such cases. When we examined just these instances, we found that participants overstated their performance and claimed to have created nine or more words 4 (14.81%), 10 (34.48%), and 16 (48.48%)

times in the do-your-best, mere goal, and reward goal conditions, respectively.

Our thesis presumes that participants knowingly misrepresented their productivity when they overstated their performance. Alternatively, participants might merely have been careless in checking and counting the words they created. To test this distinction, we calculated two scores for each participant: an overstatement score and an understatement score. As before, the overstatement score was the fraction of times participants overstated productivity relative to the number of times they missed their goal (and had the opportunity to overstate). The understatement score was the fraction of times participants understated productivity relative to the number of times they met the goal (and had the opportunity to understate). Figure 1 depicts average over- and understatement scores across conditions. Both motivational factors and carelessness can explain overstatements, but only carelessness can explain understatements. If the behavior we observed were simply careless, the overstatement and understatement scores should be equal. In addition, if goal setting does not motivate cheating, then the difference (or lack of a difference) between these scores should be the same across conditions.

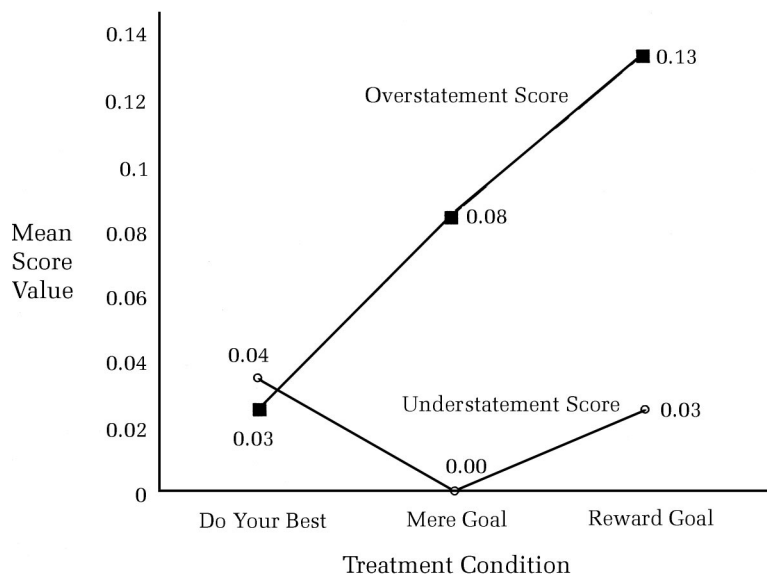
To test for a motivational effect, we compared the average overstatement score to the average understatement score in each condition. We found that the average overstatement score was significantly greater than the average understatement score in the reward goal and the mere goal conditions ($t[52] = 2.65, p = .005$ and $t[43] = 2.56, p = .007$,

respectively). The overstatement average was actually slightly less than the understatement average in the do-your-best condition, but this difference was not significant ($t[56] = 0.32, p = .32$). For each participant we computed a difference score equal to the difference between the over- and understatement scores. The average difference scores were $-0.01, 0.08,$ and 0.11 for the do-your-best, mere goal, and reward goal conditions, respectively. In keeping with Hypothesis 1, these values were significantly different ($F[2, 151] = 3.67, p = .028$). Taken together, these results identified a significant motivational effect for participants in the goal conditions, but not for participants in the do-your-best condition.

We conducted three additional post hoc analyses of our data. First, we performed our main analyses a second time, excluding “careless” participants who understated their productivity one or more times. The results from these analyses were nearly identical to the original results; there were no changes in the direction or significance levels of any of the findings.

Second, we examined self-payments. As described above, in addition to evaluating their own performance, reward goal participants paid themselves on the basis of their performance. These participants had the opportunity to take money they did not earn. Although many reward goal participants overstated their performance, only one reward goal participant took an additional \$1 (taking \$9 rather than \$8) for a round in which he or she claimed not to have reached the goal. Third, we examined the relationship between participants’

FIGURE 1
Overstatement and Understatement Results across Conditions



behavior and their responses to survey questions. Prior to conducting the experimental rounds, we asked participants in the goal conditions questions designed to measure goal commitment. The goal commitment scores were not significantly different for participants who did and participants who did not overstate their performance at least once ($t[95] = -0.55, p = .56$). Goal commitment, however, was related to productivity. An ordinary least squares (OLS) regression analysis of the average number of valid words participants created as a function of goal commitment, performance on practice rounds, and treatment condition revealed that the goal commitment parameter was a significant predictor of the number of valid words participants created ($\beta = .20, t[95] = 2.75, p = .004$).

DISCUSSION

Supporting our thesis, participants in our experiment who were given mere or reward goals overstated their productivity significantly more often than participants who were asked to do their best. However, we found that participants were not purely opportunistic. For example, reward goal participants did not take money they did not claim to have earned (with a single \$1 exception)—even though they could have easily and anonymously done so. Similarly, participants in the goal conditions did not simply claim to have reached their goals in every round. Instead, participants' behavior followed specific patterns. First, participants with goals were more likely to overstate their productivity than were participants without goals. Second, participants were more likely to overstate their productivity when they were close to, rather than far from, reaching their goals.

The majority of participants did *not* overstate their productivity. For example, even in the reward goal condition, fewer than one-third of participants (30.2%) overstated their performance when they had the opportunity to do so. Compared to a benchmark of no overstatements (allowing for random errors), however, there was a significant amount of unethical behavior that differed systematically and predictably across conditions.

Our results are consistent with Bandura's (1991) social cognitive theory, which suggests that people receive psychological rewards for attaining goals. Like Lewicki (1983), we assumed that people balance the costs and benefits of engaging in unethical behavior. We conceptualized these costs and benefits to include both psychological costs (such as negative self-perceptions) and psychological benefits (such as the psychological reward of claiming goal achievement). It is consistent with this con-

ceptualization that we found that participants with *mere* goals, who obtained no monetary or social rewards for reaching goals, were more likely to overstate their productivity than were participants attempting to do their best. This pattern of findings suggests that goal setting alone, without economic incentives, increases the value people derive from overstating productivity.

Our results also suggest that deception itself can facilitate self-justification. In our study, people were far more likely to *both* misrepresent their performance (in a way that justified taking unearned money) and then take unearned money than they were to simply take unearned money.

In practice, a number of factors are likely to moderate the relationship between goal setting and unethical behavior. For example, in our study we emphasized participant anonymity. This aspect of our design simulated many organizational settings, such as that of a consultant reporting the number of hours she has worked. In many other settings, however, an individual's productivity is more transparent, and people are held accountable for specific outcomes. In these contexts, goal setting may not significantly increase unethical behavior.

Another potential moderator of the relationship between goal setting and unethical behavior is the source of a goal. In this experiment we only considered the influence of exogenous goals. Quite possibly, self-generated goals would influence unethical behavior differently.

Future work should also examine the effects of goal failure more broadly. Unlike prior goal setting work, this study imposed a *one-minute* limit on the word creation task. This aspect of our design increased the likelihood of goal failure but, notably, it also weakened the link between goal setting and performance. Prior work has shown that goal setting impacts performance by motivating people to work more persistently (see Locke & Latham, 1990), and other scholars who have used similar word creation tasks with longer time limits (such as three minutes) have documented significant relationships between goal setting and performance (Vance & Colella, 1990).

In studying unethical behavior, one important issue to disentangle is whether the type of behavior we observed results from careless mistakes or deliberate actions. Importantly, our pattern of results supports the proposition that many of these cases were calculated lies. First, we found that the over- and understatement scores were not significantly different from each other for the do-your-best condition participants, who had no incentive to overstate performance. Second, we found that the overstatement scores *systemati-*

cally varied across the three experimental conditions in a manner consistent with our thesis. That is, although there may have been some careless overstatements, the systematic pattern of our results cannot be explained by random chance.

Prescriptively, our results suggest that managers should be vigilant for unethical behavior when they use goal setting and that educators should include an ethics “warning” when they prescribe goal setting to their students. While goal setting can be used constructively to motivate desirable behavior, our results demonstrate that goal setting can lead to unethical behavior. Our results also underscore the importance of organizational controls and offer insight into how managers should allocate their limited resource of attention. For example, when employees are close to a goal or a deadline, managers should be particularly vigilant.

In general, domains with low transparency and asymmetric information, such as negotiation and sales, represent a particular challenge. An example from the sales domain involving the automotive departments of Sears and Roebuck and Company illustrates this problem. In the early 1990s, Sears set difficult goals for its automotive service advisors. In an investigation of Sears’s automotive departments, California State regulators found that they had performed unnecessary repairs 90 percent of the time. In announcing a settlement, the company’s chairman, Edward Brennan, admitted that Sears’s “goal setting process for service advisers created an environment where mistakes did occur” (Santoro & Paine, 1993: 1).

In extreme cases, reward goals may adversely influence corporate culture. For example, Jensen (2001) contended that cheating to earn bonuses (for reward goals) is so endemic that unethical behaviors are often expected. Jensen cited examples of companies shipping unfinished products to reach sales goals. Other examples of the relationship between reward goals and unethical behavior range from “managing earnings” (that is, cooking books) to meet analysts’ expectations (DeGeorge et al., 1999) to excluding specific groups of students when reporting average standardized test scores to overstate a school’s pass rate (Bohte & Meier, 2000).

Taken together, our results identify a serious side effect of goal setting and offer insight into the mechanics of this problem. In general, a number of conditions are likely to moderate the relationship between goals and unethical behavior, and future work should explore the interplay among a corporation’s ethical climate, control systems, and use of goal setting.

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