Lying: An Experimental Investigation of the Role of Situational Factors
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Source: *Business Ethics Quarterly*, October 2011, Vol. 21, No. 4 (October 2011), pp. 605-632
Published by: Cambridge University Press
Stable URL: https://www.jstor.org/stable/41304452

REFERENCES

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ABSTRACT: Individuals often lie for psychological rewards (e.g., preserving self image and/or protecting others), absent economic rewards. We conducted a laboratory experiment, using a modified dictator game, to identify conditions that entice individuals to lie solely for psychological rewards. We argue that such lies can provide a ready means for individuals to manage others' impression of them. We investigated the effect of social distance (the perceived familiarity, intimacy, or psychological proximity between two parties) and knowledge of circumstances (whether parties have common or asymmetric information) on the frequency of lying. We found that lying occurs more frequently when social distance is near and that the effect is exacerbated when information is asymmetric. Our theoretical development suggests that, under these conditions, individuals' need to manage others' impression is magnified. We discuss the implications of our findings.

LYING IS the act of intentionally trying to mislead another (DePaulo, Kashy, Kirkendol, Wyer, and Epstein 1996). Lying is a ready means by which organizational and personal fraud are committed (Comer 1997; Titus and Grover 2001). Without question, fraud has a dramatic negative impact on the global economy. The Association of Certified Fraud Examiners' *2010 Report to the Nations on Occupational Fraud and Abuse* estimates that companies lose 5 percent of annual revenues to fraud. For 2009, the estimated worldwide fraud loss is in excess of $2.9 trillion. Beyond the massive cost, lying within organizations can damage the quality of information (for decision making) and undermine mutual trust, undercutting organizational effectiveness (Grover 1997).

Given the treacherous consequences of lying, research in business ethics has explored factors or conditions that influence individuals' propensity to engage in such behavior. At a broader level, most decision models recognize that situational/contextual factors can significantly influence individuals' moral judgment and moral action (e.g., Hunt and Vitell 1986, 1993; Jones 1991; Treviño 1986). Drawing on these theoretical advances, one stream of the business ethics literature has focused on the effect of situational factors on lying behavior. Tenbrunsel (1998) finds that more individuals lie for a larger prize. Ross and Robertson (2000) find that sales managers are more likely to lie to a competitor than to their own firm, a customer, or a channel member, and are less likely to lie in an organizational climate that stresses ethical behavior. Robertson and Rymon (2001) report that purchasing agents' likelihood of lying increases with perceived pressure to perform and the ambiguity of the organization's attitude toward ethics.[1]

We extend this line of research by investigating the effect of two situational factors on lying: social distance and knowledge of circumstances. Social distance refers

©2011 **Business Ethics Quarterly** 21:4 (October 2011); ISSN 1052-150X pp. 605–632

to the perceived familiarity, intimacy, or psychological proximity between the liar and the recipient of the lie. Knowledge of circumstances refers to the information that the two parties have on the choices available to the liar (i.e., asymmetric or common information). Both factors are relevant in organizational interactions and in business dealings. Social distance (including interpersonal relationships) plays an important role in organizational management processes (Gabarro 1987). For example, near social distance promotes mutual trust, respect, value congruence, and group cohesion (Boyd and Taylor 1998; Kiesler and Cummings 2002; Nelson 1989). Knowledge of circumstances, on the other hand, directly impacts intra- and inter-organizational decision processes. Prior research indicates that economic inefficiencies may arise when information or knowledge about the circumstances of a decision are asymmetric between parties involved in the process, including employees (Eisenhardt 1989), trading partners (Dahlstrom and Ingram 2003), and negotiators (Wilson 1995).

We investigate the interactive effect of social distance and knowledge of circumstances on a particular type of lying behavior—lying to shape others' impressions (DePaulo and Kashy 1998; DePaulo et al. 1996; Ickes, Reidhead, and Patterson 1986; Sengupta, Dahl, and Gorn 2002). Lies of this sort are told for psychological rewards rather than economic rewards. Such lies are commonplace in organizational and social interactions (DePaulo et al. 1996). For example, individuals lie to achieve a performance goal even if there is no monetary incentive for doing so (Barsky 2008; Schweitzer, Ordonez, and Douma 2004), to preserve social relationships (Nyberg 1993), to avoid being embarrassed or ridiculed (Scholl and O'Hair 2005), to fulfill others' expectations (Millar and Tesser 2001), or to guard against losing face or appearing callous (Turner, Edgely, and Olmstead 1975). These lies are distinguishable in that they do not produce tangible gain and they do not appear to harm others.

We are interested in lies that are told solely for psychological rewards because, unlike lies that produce economic rewards, they may be viewed as harmless, acceptable, or perhaps even desirable (Grover 2005; Saxe 1991; Toby 1952). But are such lies indeed harmless? Consider that the vast majority of these lies are self-serving (Camden, Motley, and Wilson 1984; DePaulo et al. 1996). A fundamental concern is that seemingly innocent falsehoods, particularly those that are self-centered, result in a deterioration of behavior over time. Such lies may become habitual, told easily and often (Bok1999; Scott 2003). Moreover, liars experience little regret (DePaulo et al. 1996). Applying research on perspective taking, the implication is that liars overestimate the likelihood that others tell lies and, perhaps more troubling, that others condone such behavior (DePaulo et al. 1996; Marks and Miller 1987; Ross, Greene, and House 1977). The resultant effect is that the norms of acceptable behavior may be lowered (Gino and Bazerman 2009). Even lies that are well-intended (e.g., lies told to help another or to be kind hearted) may have unexpected, undesirable consequences. Such lies distort the information communicated to another, and, thereby, may affect the quality of the recipient's future decisions (Malloch 2001). The downward spiral may continue and individuals who tell simple, seemingly innocent lies eventually tell strategic lies, which are not so benign (Maremont 1996; Prentice 2007; Rick and Loewenstein 2008).

Recent research in business ethics has warned that fraud in organizations often begins as a minor transgression and evolves over time into more unacceptable behavior (Fleming and Zyglidopoulos 2008; Hoyk and Hersey 2008; Maremont 1996; Prentice 2007). Research suggests that this slippery-slope effect negatively impacts the honesty of professionals, including technical writers (Bryan 1992), auditors (Karcher 1996), lawyers (Lerman 2002), and corporate managers (Zyglidopoulos and Fleming 2008). Therefore, it is important to understand conditions that lead to the first step of the deterioration process (i.e., conditions that place us on the slippery slope of ethical behavior). Only then can appropriate preventive measures be put in place. If the potential risk of an initial, seemingly minor violation of ethical principles is recognized and due measures taken, many instances of fraud potentially could be prevented and losses avoided (Bishop 2004).

The remainder of the paper is organized as follows. First, we present the theoretical framework for our study and develop our hypotheses. Next, we describe the research method, including the experimental design, participants, and procedures. Subsequently, we present the experimental results and then offer concluding remarks.

FRAMEWORK

Impression Management

The need to look good in the eyes of others can induce individuals to lie, even absent economic rewards for lying. Much research suggests that individuals care about others' impression of them and alter their behavior to shape others' assessment (Goffman 1959; Leary 1995; Schlenker 1980; Tedeschi 1981). Lying provides a means to preserve appearances (DePaulo et al. 1996). Obviously, other means can be used to manage impressions (e.g., facial expressions, mannerisms and gestures, clothing choices, etc.), without overtly lying to another. In this paper, however, we investigate individuals' willingness to lie in order to convey a positive image or to prevent a negative one.

Situational factors affect the extent to which individuals are concerned about their outward appearance (Leary and Kowalski 1990). For example, impression management motives may be heightened when individuals interact with others who are psychologically close (e.g., colleagues or in-group members) or when individuals' actions are likely to be misunderstood or misinterpreted (e.g., the intentions underlying behavior are not transparent). In either case, individuals take actions that are aimed at managing others impressions of them.

The process of constructing a desired image may be conscious or unconscious (Gioia 1989; Leary and Kowalski 1990; Schlenker 1980). Individuals may deliberately take actions to manage others' assessment. For example, individuals may conceal self-serving behavior because such behavior may be frowned upon. In other instances, behavior may be automatic, tacitly shaping others' assessment. By default, individuals may empathize with others or seek to protect others' feelings, as a commonly-accepted social convention. Research suggests that individuals care about how others feel because others' feelings can significantly influence impres-

sions or attitude (e.g., Clore, Wyer, Dienes, Gasper, Gohm, and Isbell 2001; Edwards 1990; Schwarz and Clore 1996).

Research finds that individuals' concerns for appearances can even extend to anonymous others (e.g., Batson, Thompson, and Chen 2002; Dana, Cain, and Dawes 2006). From an evolutionary perspective, a concern for appearances is fitness enhancing, as it can lead to beneficial cooperation and avoidance of punishment (Bowles and Gintis 2004; Fehr and Gachter 2002). So, a concern for appearances may be integrated and stored in memory via prototypical "scripts" or "schemas" (Abelson 1981; Taylor and Crocker 1981), which in turn determine appropriate behavior in generic contexts (e.g., in personal interactions whereby one's action influences others). Thus, a concern for others' impression can manifest itself, even in situations with anonymous choices.

We investigate two situational factors that may cause individuals to lie to maintain appearances. We argue that social distance (near versus far) and knowledge of circumstances (common versus asymmetric) jointly affect individuals' propensity to lie, with the aim being to shape others' assessment. Under certain conditions, impression management motives are intensified and, in turn, individuals may need to lie to project a desired image. While other actions may be undertaken to put forth a positive image, our focus in the current study is on lying.

Social Distance

Social distance refers to the perceived familiarity, intimacy, or psychological proximity between two parties (e.g., Park 1924). It is reduced when individuals have shared interests or traits (Borgadus 1925; Buchan, Johnson, and Croson 2006; Gallois, Callan, and Johnstone 1984; Tajfel, Billig, Bundy, and Flament 1971). In addition, social distance is reduced when individuals possesses information about others as compared to when such information is absent. Charness and Gneezy (2007) suggest that knowledge of an anonymous other's surname reduces social distance and, in turn, affects individuals' behavior. Other studies suggest that same-group membership reduces social distance, even when group assignment is *ad hoc* or random and the parties are anonymous (Buchan, Johnson, and Croson 2006; Messick and Mackie 1989; Tajfel, Billig, Bundy, and Flament 1971). Still other studies put forth that social distance may be reduced by increased exposure to others (Harrison 1977) or by the identifiability of others (Small and Loewenstein 2005). In general, knowing some tidbit about others crystallizes the relation (psychological proximity) between interacting parties.

A series of studies using economic games (Buchan, Johnson, and Croson 2006; Charness and Gneezy 2007; Charness, Haruvy, and Sonsino 2007; Charness, Rigotti, and Rustichini 2007) show that, when social distance is reduced, individuals appear to exhibit more other-regarding behavior (e.g., they are more generous, reciprocal, and cooperative). However, individuals may not necessarily be concerned with others' welfare. Instead, individuals may have heightened concerns about their appearances. We contend that reductions in social distance amplify the psychological connection or association between interacting parties (e.g., Small and Loewenstein

2005). Individuals ascribe greater value to interactions with near others (e.g., Keeney 1995). As a consequence, concern over appearances is likely to be magnified with near social distance.

Schlenker and Pontari (2000) assert that individuals care more about their image when interacting with others who are psychologically closer. With near others, individuals have a salient goal to achieve a positive social outcome, providing impetus to shape others' impression (Leary and Kowalski 1990). Thus, individuals have a greater need to construct a desired image (or to avoid an undesired image) when others are near as opposed to far. Appearance concerns, in turn, suggest that individuals may have a greater need to lie when social distance is near.[2] Our first hypothesis is as follows.

> **H1:** Individuals are more likely to lie to maintain appearances when social distance is near as opposed to far.

Knowledge of Circumstances and Social Distance

Individuals' knowledge of surrounding circumstances may moderate the effect of social distance on individuals' need to engage in impression management and, in turn, to lie. As discussed above, appearance concerns are stronger when the social distance between two parties is near than when it is far. We contend that the effect of social distance on appearance concerns is different depending on the two parties' knowledge of circumstances (whether it is common or asymmetric).

Appearance concerns cause individuals to imagine how others react to their behavior, and knowledge of circumstances provides a basis to construct such an image. If two parties have common knowledge, they have a common basis to surmise *why* a particular course of action is chosen. In contrast, if they have asymmetric knowledge, the common basis disappears and uncertainty is introduced. For expositional purposes, we refer to the two parties as actor and other. The actor chooses a course of action, and the other is affected by the actor's choice.

With common knowledge of circumstances, the two parties have a common basis to assign a reason for behavior. The actor's assessment of what constitutes appropriate and acceptable behavior is likely egocentrically biased (Loewenstein 1996). The actor's choice seems justified, and the actor imagines the other sees it that way. The actor may reason that if roles were reversed, the other would make exactly the *same* choice as the actor. Epley, Keysar, Boven, and Gilovich (2004) provide evidence that individuals' perceptions of others' assessment are overly anchored on self assessment. The effect is particularly pronounced when individuals share common information (Ross and Ward 1996). Hence, common knowledge of circumstances dampens the actor's need to engage in impression management. Although near social distance intensifies appearance concerns, common knowledge has an offsetting effect. Because the actor imagines that behavior is acceptable and appropriate, there is essentially nothing to manage.

With asymmetric knowledge of circumstances, on the other hand, the two parties no longer share a common basis to ascribe a reason for behavior—so the reason underlying the actor's behavior is not clear to the other. Business settings usually

involve asymmetric information, with the actor knowing more than the other. The other is naïve as to why a particular course of action is chosen. The actor is cognizant of the informational disparity and may be motivated to manage appearances to avoid conveying an undesirable image. De Cremer, van Dijk, and Pillutla (2010) suggest that the other is likely to respond to additional information about the actor's behavior (e.g., an explanation for the actor's behavior) when the two parties have asymmetric knowledge. The other may seek a social account of the actor's behavior in order to understand the behavior. Now, the actor may have a need to manage the other's impressions. Appearance concerns, activated by near social distance, are exacerbated with asymmetric knowledge of circumstances.

The preceding discussion suggests that social distance and knowledge of circumstances have an interactive effect on individuals' propensity to lie. With common knowledge, appearance concerns that arise due to near social distance are reduced. By comparison, with asymmetric knowledge, the appearance concerns that arise due to near social distance are intensified. The interactive effect is captured by the following two hypotheses.

H2a: With common knowledge of circumstances, the effect of social distance on individuals' propensity to lie in order to maintain appearances is diminished.

H2b: With asymmetric knowledge of circumstances, the effect of social distance on individuals' propensity to lie in order to maintain appearances is increased.

RESEARCH METHOD

Overview

We conduct a laboratory experiment to test our hypotheses. An experiment is well suited for our purposes because it provides a controlled environment in which we can systematically vary the levels of social distance and knowledge of circumstances and observe participants' behavioral reaction, thereby enhancing the internal validity of our study (Treviño 1992). By comparison, in field settings, our independent variables of interest would be difficult to manipulate and isolate from confounding factors.

Our experiment uses a modified dictator game. In a dictator game, participants are randomly paired. One participant (the dictator) chooses from a menu of options that determines how exogenous monetary rewards are allocated between self and another (the paired participant). The other participant must accept the dictator's decision and does not have an active role in the game. Our experiment is designed such that the dictator may choose an option that favors self, one that favors the other, or one that treats the two players equally (i.e., gives each player the same specified probabilities of receiving high and low payoffs). After choosing an option the dictator communicates the choice to the other, but the communication does not have to be truthful. The design is such that the dictator could choose the option that favors self, but communicate that the choice was the option that treats the two players equally (the other's low payoff can be attributed to chance). The other has no way of verifying the communication. The advantage of using this modified dictator game is that the payoff structure is simple and clear-cut, and the decision task is straightforward.

These features allow for a parsimonious examination of lying, aimed at maintaining appearances, while minimizing the potential influence of other social preferences on behavior (Charness and Rabin 2002).

Experimental Design and Participants

We manipulated social distance and knowledge of circumstances, which resulted in a 2×2 experimental design. Social distance was manipulated by varying the representation of the other, and knowledge of circumstances was manipulated by varying the information available to the other. We elaborate on the details of the manipulations later.

We recruited 244 students, the vast majority being undergraduates, from three U.S. universities. The average age of participants is 21.57, with 63.5 percent being male. The students come from a variety of academic fields, with the two largest being management (48.8 percent) and engineering (21.3 percent). Participants were randomly paired, giving us 122 dictators and 122 others. We do not find any significant difference in demographic characteristics between participants assigned the role of dictator and those assigned as other. We randomly assigned participants to the four experimental conditions. In each condition, we allowed dictators to freely choose an option and send a message to the other. However, we are particularly interested in dictators who choose the self-interested option. We expect dictators to be more inclined to lie when they choose the self-interested option than otherwise. We focus on this case, in which lying is most likely to occur, because it provides sufficient room for observing differential behavior in hypotheses testing. Moreover, studying lies told to conceal a self-interested choice has more practical implications because, as indicated earlier, empirical findings show that most lies in naturally occurring settings are self-centered.

Experimental Procedures

A researcher and monitor conducted the experiment. The experimental instructions (for two treatments) are included in the appendix (pp. 622–25). Initially, the instructions were distributed and read aloud. The instructions described three options (A, B, or C, as shown in Table 1, p. 612), with payoff allocations, and indicated that the dictator would send a message about the option chosen (i.e., the dictator knew that a message would be sent prior to choosing a payoff allocation).[3] We use the terms dictator and other in the paper for expositional convenience. In the instructions, the dictator was referred to as the sender and the other as the receiver.

After the instructions were read, the dictators chose among the three options to allocate payoffs. Under option B, the payoff for each player was determined independently by tossing a coin twice—the first toss determined the dictator's payoff and the second the other's payoff. The dictator recorded the option chosen. Then, the dictator chose among three messages to communicate to the other. The potential messages included (1) "I chose option A," (2) "I chose option B," and (3) "I chose option C." The second message was indicative of a payoff for the other that was consistent with options A *and* B or B *and* C, conditioned on the amount received.

Table 1: Modified Dictator Game[a]

Player	Dictator's Choice Set		
	Option A (Self-Interested)	Option B[b] (Equitable)	Option C (Generous)
Dictator	\$ 10	50% \$ 10	\$ 5
		50% \$ 5	
Other	\$ 5	50% \$ 10	\$10
		50% \$ 5	

[a]The modified dictator game proceeds as follows. The dictator chooses among three options (A, B, and C) to determine own payoff and another person's payoff. The cell entries include the payoff for each player under the different options.

[b]For option B, the payoff of each player is determined independently. A coin is tossed twice: a heads indicates a payoff of \$10 and a tails \$5. The first toss determines the dictator's payoff, and the second toss the other's payoff.

The other did not know the dictator's specific choice, only what the dictator communicated. The dictator was given an envelope that included three slips of paper, each with a potential message. The dictator selected one of the messages and put it in a second envelope. The monitor collected this second envelope and put the other's payoff in it, as determined by the dictator's option choice. Then, the second envelope was sealed and subsequently distributed to the other. The dictator was paid based on his or her option choice.

Afterward, the dictator completed a post-experiment questionnaire. The questionnaire was designed to collect demographic and background information and to elicit dictators' assessment of factors that affected their choices of the option and message. The questionnaire also included two open-ended questions, which asked participants to describe as best as they could how they reached their decisions in the experiment. The envelopes that contained the message and the other's payoff subsequently were distributed, randomly, to the others.

Manipulation of Independent Variables

Social Distance

Social distance was manipulated between experimental sessions. In the near distance treatment, dictators and others initially met in the same room. The sessions in this treatment included from sixteen to twenty-eight participants. Before experimental instructions were distributed, participants were informed that one half of them would remain in the current room, and the other half would proceed to the other room. Based on the experimental protocol, all participants were in the same room together for approximately five minutes. Participants drew from a deck of cards to determine whether they would remain in the current room or go to another room. At this point, participants had no knowledge of the experimental task nor that participants in different rooms would be randomly paired.

After participants were separated into two rooms, experimental instructions were passed out, roles were assigned, and the modified dictator game commenced. By

having participants meet in the same room, the other is represented as someone from an identifiable referent group.

In the far distance treatment, the dictators and others never saw one another. Dictators were informed that they would be matched with another participant, who was not in the current room. Dictators were told nothing further of the others. Now, the representation of the other is abstract and nebulous. Logistically, the sessions with the others were conducted several days after the dictators made their choices. Recall that the dictator's message and other's payoff were placed in a sealed envelope, which was collected at the end of the sessions with the dictators.

We acknowledge that *near* social distance, as manipulated in our experiment, may not be as near as that observed in many business settings. In this paper, our focus is on the difference between near and far social distance (i.e., an incremental effect). To the extent that our manipulation works against finding an effect of social distance (near versus far), it provides a stronger test for our hypotheses.

Knowledge of Circumstances

Knowledge of circumstances, like social distance, was manipulated between experimental sessions. The others received a set of instructions that described the experiment. In the common information treatment, the others were presented with information similar to that given to the dictator. Specifically, the others knew how each player's payoff was determined under each option (i.e., full disclosure of the three options included in Table 1). In the asymmetric information treatment, the others were presented with a reduced set of information such that the others knew how their payoff was determined, but not the dictator's payoff. In this case, the others' instructions included only the bottom row of Table 1.

We note that in the asymmetric information treatment, our choice of payoffs (i.e., the experimental setup) provides an impetus for the dictator to lie about choosing the self-interested option. Absent information on the dictator's payoff, the other may judge such a choice as unfair or unjust. Accordingly, we investigate a specific case in which asymmetric information of payoffs underscores the need to manage another's impressions. We readily acknowledge that other payoff choices might not create a need to lie.

RESULTS

Dictators' Self-Interested Choices

In our experiment, 68.9 percent (84 of 122) of the dictators chose the self-interested option. The choices were similar across the four conditions: the proportion of dictators who chose the self-interested option ranged from 65.7 to 72.4 percent. A chi-square test indicates that the option choice was independent of the experimental condition, χ^2 (3, N = 122) = 1.33, p = 0.970, and a binomial test indicates that the dictator was more likely to choose the self-interested option than the other options (combined) at $p < 0.001$.

As part of the post-experiment questionnaire, the dictators indicated how important several factors were in making their option choice. The dictators responded

on a ten-point scale, with endpoints labeled 1 = not important at all and 10 = very important. The two most important factors were "the dictator's payment" (median of 9.0 and mode of 10.0) and "what makes the most economic sense" (median of 9.0 and mode of 10.0). The dictators also explained, in an open-ended manner, how they made their option choice. Most provided responses consistent with maximizing own payoff. One participant stated that "I selected the option that maximized my profit." Another explained that "I chose the option that seemed to be the most beneficial to me." Hence, the dictators, as a group, acknowledged making self-interested choices. Now we turn to the main focus of the paper—whether dictators who chose the self-interested option lied about their choice.

To Lie or Not to Lie

As discussed earlier, we are interested in the behavior of dictators who choose the self-interested option (i.e., whether they lie to conceal their choice). Indeed, lying only occurred when dictators chose this option. We find that 21.4 percent of the dictators lied (18 out of 84) despite the fact that the dictator did not gain anything financially from lying. Of these lies, 72.2 percent (n=13) of the dictators indicated that option B was chosen, and 27.8 percent (n=5) indicated that option C was chosen.

For the five participants who indicated that they chose the generous option (but really chose the self-interested option), we examined their responses to the post-experiment questionnaire, which asked them to describe how they decided what message to send. Three responded that it was to influence what the other thought, and the other two responded that they gave little thought to the message. Of the five who said they chose the generous option, we suggest that three were concerned with their appearance, but at the time did not realize that the message was inconsistent with the option choice. For the other two, they did not appear to have been concerned with appearances. We repeated all analyses excluding these two participants and again excluding all five participants, and the results were unaffected (not tabulated).

The frequency of lying by experimental condition is reported in Table 2 and depicted in Figure 1. An examination of Table 2 and Figure 1 suggests that lying occurs more frequently with near social distance as opposed to far social distance, and the effect of social distance is particularly pronounced with asymmetric information of payoffs. Next, we conduct formal statistical analyses to test our hypotheses. We only include participants (dictators) who choose the self-interested option in our analyses. Notwithstanding, inferences are unaffected if all participants are included in the analyses.

Table 2: Lying Behavior by Experimental Condition[a]

	Asymmetric Information of Payoffs		Common Information of Payoffs	
	Near Social Distance	Far Social Distance	Near Social Distance	Far Social Distance
Lie	10	0	5	3
Do Not Lie	13	23	12	18
Total	23	23	17	21

[a]The cell entry is the number of dictator-participants who lied and did not lie in each experimental condition.

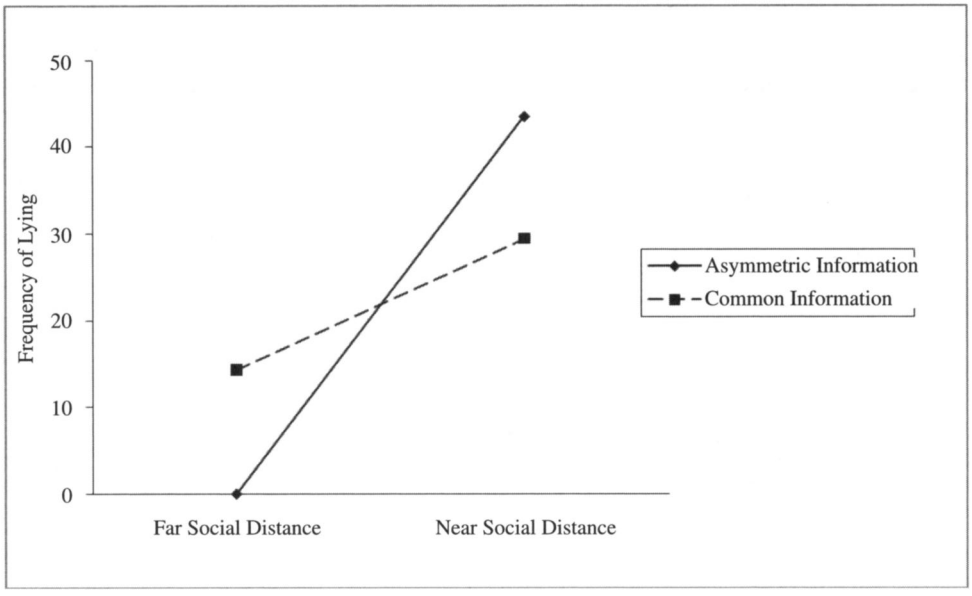

Figure 1: Data Plot of Mean Proportion of Lying[a]
[a]The endpoints plotted in the figure represent the proportion of dictator-participants who lied, which occurred when the dictator's message did not coincide with the option choice. Near and far social distance refers to whether the other is from a group that the dictator has previously seen. Common and asymmetric information refer to whether the other knows the dictator's payoff.

Our first hypothesis (H1) predicts that the dictator is more likely to lie about the option choice when social distance is near as opposed to far. Our second set of hypotheses (H2a and H2b) predicts an interaction effect. First, common information of payoffs dampens the effect of social distance on the dictator's need to lie, such that the difference between near and far distance is reduced (H2a). Second, asymmetric information of payoffs intensifies the effect of social distance on the dictator's need to lie, such that the difference between near and far social distance is magnified (H2b).

To test our hypotheses, we perform a logistic regression. The dependent variable is whether the dictator lied (defined as one if the dictator lied and zero otherwise). The independent variables include dummy variables for social distance and knowledge of circumstances. For social distance, the dummy is defined as one if social distance is near and zero otherwise. For knowledge of circumstances, the dummy is defined as one if the information of payoffs is common and zero otherwise. We also include the interaction term (social distance × knowledge of circumstances) as an independent variable.

Before performing the analysis, we consider a potential problem. As seen in Table 2, there is a "sampling zero" cell in our data (i.e., in our sample, no one lied with far social distance and asymmetric information of payoffs). With this zero-count cell, using the conventional logistic regression is problematic because regression coefficients and standard errors are seriously distorted (Agresti 1990; Hosmer and Lemeshow 2000). In this case, the appropriate statistical test is an exact logistic analysis, which uses non-asymptotic methods, as opposed to the conventionally-used asymptotic methods, to estimate the logistic regression model (Derr 2000;

Hirji 2006; Hosmer and Lemeshow 2000). We conduct an exact conditional score logistic regression (Stokes, Davis, and Koch 2000) of participants' lying behavior on social distance, knowledge of circumstances, and the interaction term. As reported in Panel A of Table 3, the results show that there is a significant main effect of social distance ($p < 0.001$) on lying, which is consistent with H1. The interaction effect of social distance and knowledge of circumstances also is significant ($p = 0.039$), which is consistent with H2a and H2b. We conduct additional analyses to interpret the statistically significant interaction effect.

We first consider the effect of social distance on the dictator's behavior with common information of payoffs. As reported in Panel B of Table 3, for this group of dictators, an exact conditional score logistic regression of lying on social distance reveals that social distance does not have a statistically significant effect ($p = 0.426$). In contrast, with asymmetric information of payoffs, social distance has a significant effect ($p < 0.001$): the frequency of lying increases from 0 percent when social distance is far to 43.5 percent when social distance is near (see Table 2). Furthermore, we compare the effect of social distance on lying under asymmetric or common information of payoffs, respectively, against the average effect of social distance on lying across the entire sample. As shown in Panel B of Table 3, the regression coefficient on social distance in the average-effect analysis (2.08) is lower than the regression coefficient on social distance in the analysis with asymmetric information of payoffs only (3.10), but higher than the regression coefficient on social distance

Table 3: Tests of Hypotheses[a]

Panel A: Overall Factorial Test (N = 84)[b]

Independent variable	*Coefficient*	*Score*	*p-value*[d]
Social Distance	3.10	12.50	0.0003*
Knowledge of Circumstances	1.52	3.45	0.1004
Social Distance × Knowledge of Circumstances	-1.81	3.97	0.0394*

Panel B: Tests of the Effect of Social Distance on Lying[c]

Independent variable	*Coefficient*	*Score*	*p-value*[d]
The entire sample (N=84)			
Social Distance	2.08	11.58	0.0005*
With asymmetric information (N=46)			
Social Distance	3.10	12.50	0.0003*
With common information (N=38)			
Social Distance	0.89	1.26	0.4258

[a]The tests are conducted using exact conditional score logistic regressions, with the dependent variable being a dummy variable indicating whether the dictator-participant lies (which equals one if the dictator lied and zero otherwise).

[b]Panel A reports the regression results for the factorial effects of social distance (a dummy variable that equals one if social distance is near and zero otherwise) and knowledge of circumstances (a dummy variable that equals one if information of payoffs is common and zero otherwise) on lying behavior.

[c]Panel B reports the regression results for the effect of social distance on lying based on the entire sample, the treatments in which information of payoffs is asymmetric, and the treatments in which information of payoffs is common.

[d]An asterisk indicates that a one-tailed p-value is reported for tests of directional predictions.

in the analysis with common information of payoffs only (0.89 and non-significant). In other words, asymmetric information of payoffs appears to intensify the general effect of social distance on lying, whereas common information of payoffs appears to diminish this effect. Overall, the above findings are consistent with H2a and H2b.

Supplemental Analysis of Lying

As part of the post-experiment questionnaire, we asked participants to indicate the importance of various factors in deciding *what* message to send to the other player (i.e., whether to lie about the option choice). Participants responded on a ten-point scale, anchored by 1 = not important at all and 10 = very important. We performed Mann-Whitney tests to compare the responses of participants who lied with those who did not. We identified two noteworthy differences. Participants who lied were more concerned with "influencing what the other student thinks of you" than participants who did not lie: medians of 6.0 and 3.0, respectively, $z = -2.26$, $p = 0.024$. They also were more concerned with "making the other student happy with your choice among the available options" than students who did not lie: medians of 5.0 and 4.0, respectively, $z = -1.83$, $p = 0.067$. The former directly reflects a concern for appearances, whereas the latter suggests a concern for the other's feelings. Both concerns fall under the umbrella of impression management because, as discussed earlier, research suggests that others' feelings can influence their impression formation. Nevertheless, the fact that the majority of dictators chose the self-interested option is clearly inconsistent with any genuine other-regarding consideration.

We also examined the dictators' open-ended responses as to how they decided on the message to send to the other player. For participants who lied about the option choice, 61 percent (11 of 18) indicated that appearances were important. One participant wrote "To appear as fair as possible to the other student." Another participant stated "I chose my message based upon how it would portray me to the other person." Still another explained "I decided what message to send partly based on how the other person would view me." For participants who did not lie, 92.4 percent (61 of 66) seemed to be interested in accurately conveying their option choice. A sample of participants' responses included "I picked the message that said what I really did," "I wanted to be honest," and "I chose to tell the other student the truth about what I chose." Hence, the dictators' message choice was influenced by either others' impression (for those who lied) or concerns for communicating the actual choice (for those who did not lie).

Alternative Explanation for Findings

A potential alternative explanation for our findings is that the dictator did not lie with far social distance because the dictator did not believe that the other was real: that is, the dictator had no reason to lie to someone who did not exist. Frohlich, Oppenheimer, and Moore (2001) suggest that participants may doubt the existence of a paired other when the other is unseen. To assess this explanation, we examined the dictator's open-ended responses to "how you decided what message to send." No one responded that they doubted the other was real. Furthermore, the proportion

of times that the other-regarding (equitable and generous) options were chosen did not differ across experimental conditions, χ^2 (3, N = 122) = 0.35, p = 0.950.

To further address the issue, we recruited thirty-four students (seventeen pairs) and re-administered the experiment, but only for the cell with far social distance and asymmetric information on payoffs. We chose these conditions because, when we initially ran the experiment, we did not observe any lying under such conditions. We altered the post-experiment questionnaire to determine whether the dictator had doubts about the other's existence. The questionnaire asked the dictator to choose a reason (from a list of five) to explain the message choice. The reasons included (1) to be honest with the other student, (2) to influence what the other student thinks, (3) just picked one, did not give much thought to the message, (4) was not concerned about the message because the other student was not real, and (5) other. If participants doubted that the other existed, some would be expected to check (4).

We found that 71 percent of the dictators (twelve of seventeen) chose the self-interested option, with one lying about the choice. The findings mirror those reported earlier. Looking at the dictators' reason underlying the message choice, twelve responded they that they wanted to be honest, two responded to influence what the other thought, and three responded other. Most notably, *none* responded that the other student was not real. Therefore, we do not have any evidence that dictators doubted that the other existed in the far social distance condition.

DISCUSSION AND CONCLUSION

Individuals often lie for psychological rewards (e.g., preserving self image and/or protecting others), absent economic rewards. We conducted a laboratory experiment, using a modified dictator game, to identify conditions that entice individuals to lie solely for psychological rewards. In the experiment, participants are paired anonymously. One participant (the dictator) chooses among three options, which determine payoffs to self and another. The options are characterized as follows: (1) the payoff allocation favors the dictator, referred to as the self-interested option; (2) the payoff allocation treats the two parties equally, referred to as the equitable option; and (3) the payoff allocation favors the other, referred to as the generous option. After choosing an option, the dictator sends a message to the paired other. The message indicates the option chosen, but lying is allowed. The experiment is designed such that the other is unable to discern whether the message is truthful. In other words, the dictator can choose the self-interested option, but say that s/he chose the equitable option and not be found out.

In our experiment, we manipulate social distance (near versus far) and knowledge of circumstances (common versus asymmetric). For near social distance, all participants initially meet in the same room, such that the other comes from an identifiable referent group. The paired other is not known specifically, but rather the other's group is known. For far social distance, participants in the two roles never see one another, so that the other is abstract and nebulous. For common knowledge, the other knows *how* each party's payoff is determined. For asymmetric knowledge, the other does not know *how* the dictator's payoff is determined. We contend that

individuals' need to manage others' impression is magnified with near social distance and, more so, when interacting parties' knowledge of circumstances is asymmetric. The experimental results are consistent with our expectations.

Our findings have implications for organizational management research and practice. Prior research suggests that near social distance among employees is preferable because it improves the superior-subordinate relationship, strengthens employees' group identity, and reduces intra-organizational transaction costs (Ashforth and Mael 1989; Boyd and Taylor 1998; Kramer, Hanna, Su, and Wei 2001; Marcus and House 1973; McPherson, Popielarz, and Drobnic 1992). Consistent with this reasoning, Seeman and Evans (1961) find that far social distance between superior and subordinates negatively affects subordinates' performance. Perrucci (1963) shows that far social distance increases inter-personal frictions among organizational members. Yagil (1998) finds that near social distance increases the effectiveness of leadership, and Chan and Goto (2003) find that near social distance helps resolve organizational conflicts.

The results of our study provide caveats by highlighting an unwanted consequence of near social distance. To the extent that employees are concerned about what others think of them, reduced social distance intensifies the concern. As a result, employees are more likely to expend time and effort on impression management activities, which could affect their work quality and performance. Lying is a useful means of manipulating others' impression. In this regard, the employee (liar) can avoid a bad image and avert feelings of guilt, while at the same time pursuing actions that are in his or her best interest. But enabling the employee to pursue self interest is often suboptimal for the organization. Hence, besides chronic harm to societal and organizational morality, lies can have adverse effects on organizations' operating performance. Our study offers a warning to organizational leaders who believe that lies told for psychological rewards are less blameworthy and more forgivable than lies told for economic rewards (e.g., Peterson 1996; Sweetser 1987).

The results of our study show that the unwanted effects of near social distance are magnified when information between interacting parties is asymmetric. As noted earlier, in our setting, asymmetric information affects the other's perception of whether the chosen option provides a fair or just payoff allocation: that is, the self-interested option (certainty of $5) appears unfair or unjust as compared to the equitable option (50-50 chance of $10 or $5). Our finding underscores the importance of transparently disseminating relevant information, in this type of setting, regarding why specific actions are taken in organizations. Although reducing information asymmetry may not necessarily prevent individuals from engaging in certain (undesirable) actions, it may attenuate the appeal for individuals to try to influence others' judgment, thereby dampening the likelihood of untruthful or distorted communication.

Our findings should be interpreted in light of potential limitations. First, the data are collected in the laboratory, which may be characterized as an artificial and sterile setting. This method allows us to control the information available to participants and carefully specify relationships (e.g., the payoffs associated with particular actions), which are crucial for testing theory. But to the extent that meaningful contextual

factors are omitted from our investigation, the generalizability of the findings is limited. Future research may delve into identifying additional factors that affect employees' willingness to tell lies solely for psychological rewards. Such research may serve to enrich extant theory.

Our findings suggest that, under certain conditions, individuals' need to manage others' impression of them is intensified. A limitation of our experimental design is that it does not allow us to isolate the specific mechanism that underlies impression management concerns. We acknowledge that participants may be concerned about what others think for a variety of reasons, including enhancing one's image, avoiding disapproval, and making others happy (e.g., Folkes 1982). Furthermore, we cannot completely rule out the possibility that other concerns, unrelated to appearances, play a role in participants' decisions to lie to others. For example, participants may have genuine other-regarding concerns, which prompt them to lie. We leave an examination of these issues for future study.

Prior studies suggest that the ethicality of behavior is related to individuals' personal traits, such as their stage of moral development (Kohlberg 1984). In our setting, certain personality variables may influence individuals' motive to manipulate others' impression or feelings and, in turn, their inclination to lie. Such personality variables include self-monitoring orientation, which refers to the degree to which individuals are sensitive to how their expressive behavior is socially appropriate (Snyder 1974, 1979), and interpersonal self-esteem, which refers to self-esteem developed based on how individuals perceive others evaluate them (Hewitt and Goldman 1974; MacDonald, Saltzman, and Leary 2003). We did not examine the effects of these individual differences because it is beyond the scope of the current study. Instead, we controlled for such differences by randomly assigning participants to different experimental treatments. An avenue for future study is to explore whether personal factors interact with situational factors to affect individuals' lying behavior.

In the current study, we were very careful how we manipulated social distance. With near distance, participants had previously seen one another in a group setting, but did not know the specific identity of their paired counterpart. With far distance, participants knew that their paired counterpart was another student and nothing further. We attempted to hold other factors constant between the two groups; however, we acknowledge that social distance includes many dimensions, such as individuals' ethnicity, sex, physical characteristics, and randomly assigned factors. Furthermore, near social distance may involve face-to-face and repeated interaction. The findings in this study apply to one dimension of social distance. Future research may examine the effect of other aspects of social distance on individuals' propensity to lie, especially when social distance is reduced such that participants have greater familiarity with one another. We conjecture that greater familiarity reduces social distance and, in turn, strengthens impression management concerns.

As mentioned earlier, the experimental setup was designed to investigate a specific case of asymmetric information of payoffs (coupled with social distance) on lying behavior. Based on the design, the dictator's choice of the self-interested option was more likely to be perceived negatively (e.g., as unjust or unfair) by the other than the equitable or generous options. However, such a design is necessary to examine

the effect of appearance concerns on lying behavior—otherwise the dictator may have little motive to lie. Accordingly, the findings apply only to situations in which information asymmetries compel individuals to lie to manage others' impressions.

In the current study, we required participants to send a message: that is, the dictator was forced to either be truthful or lie. But another option, which is normally available, is to allow the dictator to not send a message. Bok (1999) suggests that remaining silent is a viable option that can enable individuals to get around lying. An interesting extension of our work would be to determine how including a "no message option" affects behavior—whether the dictator would choose to remain silent as opposed to lying under certain conditions.

Despite the limitations, the current study provides insight into *why* individuals engage in lying absent economic reward: impression management concerns are a force to be reckoned with in organizational settings. Seemingly innocent lies that are attributable to such concerns, though benign on the surface, may produce harmful effects over time.

APPENDIX

Experimental Instructions for the Dictator:
Near Social Distance and Common Knowledge Treatment

You have been asked to participate in a short decision-making experiment. In the experiment, you will be matched with another student—someone taken to the other room to complete the experiment. Neither of you will ever know the identity of the other (i.e., who is matched with who). The money you earn will be paid to you today in cash at the conclusion of the session. In addition, the other student will be paid based on your choice, as explained below.

Two possible monetary payments are available to you (Sender) and the other student (Receiver).

	Option A	Option B	Option C
Sender	\$ 10	50% \$ 10 50% \$ 5	\$ 5
Receiver	\$ 5	50% \$ 10 50% \$ 5	\$10

So with option A, you are paid \$10 and the other student is paid \$5. With option B, you and the other student each have a 50% chance of being paid \$10 and a 50% chance of \$5. With option C, you are paid \$5 and the other student is paid \$10. The amount that each of you is paid under option B is determined independently. A coin will be tossed twice at the conclusion of the experiment to determine the amount that each of you will be paid. A coin toss of a heads results in a payment of \$10. A coin toss of tails results in a payment of \$5.

The choice of option A, B, or C is up to you. The Receiver will only receive information about the options, i.e., the table above.

After you select option A, B, or C, you choose to send the Receiver a message. The possible messages are as follows:

"I chose option A." "I chose option B." "I chose option C."

You have 2 envelopes. One envelope contains the three messages. Put the message you wish to send the Receiver in the other envelope, labeled "Message to Receiver."

Do you have any questions?

Please indicate which option you chose by circling A, B, or C below and place your message to the Receiver in the other envelope.

Circle one: I choose Option A Option B Option C.

Experimental Instructions for the Other:
Near Social Distance and Common Knowledge Treatment

You have been asked to participate in a short decision-making experiment. In the experiment, you will be matched with another student—located in the room you just left. Neither of you will ever know the identity of the other (i.e., who is matched with who). The money you earn will be paid to you today in cash at the conclusion of the session. You will be paid based on the other student's choice, as explained below.

Three possible monetary payments were available to the other student (Sender) and you (Receiver).

	Option A	Option B	Option C
Sender	\$ 10	50% \$ 10 50% \$ 5	\$ 5
Receiver	\$ 5	50% \$ 10 50% \$ 5	\$10

So with option A, the other student is paid \$10 and you are paid \$5. With option B, you and the other student each have a 50% chance of being paid \$10 and a 50% chance of \$5. With option C, the other student is paid \$5 and you are paid \$10. The amount that each of you is paid under option B is determined independently. A coin was tossed twice at the conclusion of the Sender's experiment to determine the amount that each of you will be paid. A coin toss of a heads results in a payment of \$10. A coin toss of tails results in a payment of \$5.

The choice of option A, B, or C was up to the Sender.

After the Sender selected option A, B, or C, he/she chose a message to send to you. The possible messages are as follows:

"I chose option A." "I chose option B." "I chose option C."

The Sender placed the message he/she wished to send you (the Receiver) in an envelope, labeled "Message to Receiver."

You have been given the envelope with the message sent to you by the Sender, as well as your earnings for this portion of the experiment. You will now be asked to complete a questionnaire for which you will receive additional compensation.

Do you have any questions?

Experimental Instructions for the Dictator:
Far Social Distance and Asymmetric Knowledge Treatment

You have been asked to participate in a short decision-making experiment. In the experiment, you will be matched with another student. Neither of you will ever know the identity of the other. The money you earn will be paid to you today in cash at the conclusion of the session. In addition, the other student (who is not in this room) will be paid based on your choice, as explained below.

Three possible monetary payments are available to you (Sender) and the other student (Receiver).

	Option A	Option B	Option C
Sender	$ 10	50% $ 10 50% $ 5	$ 5
Receiver	$ 5	50% $ 10 50% $ 5	$10

So with option A, you are paid $10 and the other student is paid $5. With option B, you and the other student each have a 50% chance of being paid $10 and a 50% chance of $5. With option C, you are paid $5 and the other student is paid $10. The amount that each of you is paid under option B is determined independently. A coin will be tossed twice at the conclusion of the experiment to determine the amount that each of you will be paid. A coin toss of a heads results in a payment of $10. A coin toss of tails results in a payment of $5.

The choice of option A, B, or C is up to you. The Receiver will only know the amounts that s/he could have been paid. In other words, the other student will only see part of the table, specifically what is shown below.

	Option A	Option B	Option C
Receiver	$ 5	50% $ 10 50% $ 5	$10

After you select option A, B, or C, you choose to send the Receiver a message. The possible messages are as follows:

"I chose option A." "I chose option B." "I chose option C."

You have two envelopes. One envelope contains the three messages. Put the message you wish to send the Receiver in the other envelope, labeled "Message to Receiver."

Do you have any questions?

Please indicate which option you chose by circling A, B, or C below and place your message to the Receiver in the other envelope.

Circle one: I choose Option A Option B Option C.

Experimental Instructions for the Other:
Far Social Distance and Asymmetric Knowledge Treatment

You have been asked to participate in a short decision-making experiment. In the experiment, you will be matched with another student (who is not in this room). Neither of you will ever know the identity of the other. The money you earn will be paid to you today in cash at the conclusion of the session. You will be paid based on the other student's choice, as explained below.

Three possible monetary payments were available to you (Receiver).

	Option A	Option B	Option C
Receiver	$ 5	50% $ 10 50% $ 5	$10

So with option A, you are paid $5. With option B, you have a 50% chance of being paid $10 and a 50% chance of $5. With option C, you are paid $10. Under option B a coin was tossed at the conclusion of the Sender's experiment to determine the amount that you will be paid. A coin toss of a heads results in a payment of $10. A coin toss of tails results in a payment of $5.

The choice of option A, B, or C was up to the Sender.

After the Sender selected option A, B, or C, he/she chose a message to send to you. The possible messages are as follows:

"I chose option A." "I chose option B." "I chose option C."

The Sender placed the message he/she wished to send you (the Receiver) in an envelope, labeled "Message to Receiver."

You have been given the envelope with the message sent to you by the Sender, as well as your earnings for this portion of the experiment. You will now be asked to complete a questionnaire for which you will receive additional compensation.

Do you have any questions?

NOTES

The authors gratefully acknowledge the financial support of the Federal Reserve Bank of Atlanta. The views expressed here are those of the authors and not necessarily those of the Federal Reserve Bank of Atlanta or the Federal Reserve System. The authors thank Marshall Schminke and three anonymous referees for insightful and helpful comments. We also thank Dan Li and Ao Yang for research assistance. Lastly, we thank Jim Cox and the EXperimental Economics CENter (EXCEN) at the Andrew Young School of Policy Studies at Georgia State University for use of their experimental laboratory.

1. Other research considers whether it is appropriate to lie (in a normative sense) in certain situations (Carson 1993, 2001; Dees and Cramton 1991, 1995; Holley 1998; Strudler 1995).

2. In typical business environments, social distance may vary, but it is unlikely to be very near, which would entail intimate knowledge of another. In the current paper, we are dealing with a specific type of lying—lying to maintain appearances. An individual's motive to tell such lies may be suppressed when the other has intimate and detailed knowledge of the individual because, in these cases, the other knows the *real* individual and, therefore, impression management is pointless. Arguably, such cases often occur in non-business settings.

3. The fact that the dictator knows, *a priori*, that a message will be sent may invoke an "associated" decision process. That is, the dictator may consider the option and message choices simultaneously, together with other factors including the benefit of choosing option A rather than option B and the risk of lies being detected (which is nil in our experiment). Future research could investigate instances in which the dictator makes decisions via a "dissociated" process (e.g., the dictator learns that a message will be sent after choosing an allocation).

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