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Who Lies?

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Seventy-seven undergraduates and 70 demographically diverse members of the community completed 12 individual-differences measures hypothesized to predict lie-telling in everyday life and then kept a diary every day for a week of all of their social interactions and all of the lies that they told during those interactions. Consistent with predictions, the people who told more lies were more manipulative, more concerned with self-presentation, and more sociable. People who told fewer lies were more highly socialized and reported higher quality same-sex relationships. Manipulative people, less highly socialized people, and people with less gratifying same-sex relationships also told especially more self-serving lies, whereas people with higher quality same-sex relationships told relatively more other-oriented lies.

In a pair of diary studies of lying in everyday life, DePaulo, Kashy, Kirkendol, Wyer, and Epstein (1996) noted that, over the course of a week, people reported telling anywhere from 0 to 46 lies. Who were those people who told dozens of lies in their day-to-day lives? Did they differ from those who told hardly any lies at all? Is there a lie-telling personality type?

Studies of personality and lying have come in several varieties. For example, there are numerous studies in which people were instructed or induced to lie and to tell the truth, and their success at fooling others with their verbal and nonverbal cues was assessed (e.g., DePaulo, Blank, Swaim, & Hairfield, 1992; DePaulo & Rosenthal, 1979; Keating & Heltman, 1994; Riggio & Friedman, 1983). This literature has much to say about the kinds of people who can succeed at lying when asked to try, but it is silent on the perhaps more interesting question about the kinds of people who repeatedly take it upon themselves to tell lies. Another approach to the study of personality and lying is to design a situation that tempts people to lie and then observe whether personality predicts who actually does lie (e.g., Exline, Thibaut, Hickey, & Gumpert, 1970). Most of those studies have been imaginative, but the light that they shine is a focused beam that illuminates only the specific kinds of situations that have been modeled. To learn whether there are personality predictors of lie-telling in the broad domain of everyday life requires a very different methodology. A daily diary methodology, in which people record all of their social interactions and all of the lies that they tell during those interactions, seems particularly well suited to the task.

Scholars of many stripes, including sociologists (e.g., Barnes, 1994), psychologists (e.g., Saarni & Lewis, 1993), and philosophers (e.g., Nyberg, 1993), have commented on the harsh view of lying that seems prevalent in Western society. Solomon (1993), for example, noted that "throughout the history of philosophy, deception has been assumed to be a vice, honesty a virtue. . . . [This] philosophical championing of honesty is an accurate reflection of popular morality. Lying, for philosophers and laymen alike, is wrong" (pp. 31–32). Our own perspective on lying is akin to that of Nyberg (1993), who argued that lying is "publicly condemned" at the same time that it is "privately practiced by almost everybody" (p. 7). On the basis of the literatures on identity and impression management from sociology (e.g., Goffman, 1959), linguistics (e.g., Brown & Levinson, 1987), and social psychology (e.g., Schlenker & Weigold, 1989), as well as our own previous research (DePaulo et al., 1996), we believe that lying is an everyday social interaction process. Lying is a fact of social life rather than an extraordinary or unusual event. People tell lies to accomplish the most basic social interaction goals, such as influencing others, managing impressions, and providing reassurance and support. Each of these goals, when valued deeply, provides a motivation for lying.

In the present research, we examined six individual-differences dimensions that we expected to be especially important predictors of lying in everyday life. We hypothesized that high rates of lying would be characteristic of people who are manipulative, concerned with the impressions they make on other people, insecure, and sociable and that low rates would be characteristic of those who are highly socialized and whose interpersonal relationships are especially satisfying. We also thought that personality would predict the kinds of lies that people tell. For example, although we believed that people with satisfying interpersonal relationships would tell fewer lies overall, we also thought that when they did lie, relatively more of their lies would be altruistic or other oriented (lies that served to protect

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or benefit other persons) and fewer would be selfish or self-centered (lies that served to protect or benefit the liar).

Manipulativeness

Lying can be used instrumentally to achieve social interaction goals such as winning friends and influencing people. This manipulative use of lying is at the heart of the personality construct of Machiavellianism. People high in Machiavellianism view others cynically, show little concern for conventional morality, and openly admit that they will lie, cheat, and manipulate others to get what they want (Christie & Geis, 1970; Falbo, 1977). Interpersonally, they are scheming but not stupid. They do not exploit others when their victims might retaliate (Christie & Geis, 1970), and they do not cheat when they are likely to get caught (Bogart, Geis, Levy, & Zimbardo, 1970). In interview situations, it is clear that those high in Machiavellianism are ambitious and dominating, but they also seem relaxed, talented, and confident (Cherulnik, Way, Ames, & Hutto, 1981). In competitive situations, they walk away with far more than their fair share of the spoils (Christie & Geis, 1970), yet they are liked more than people low in Machiavellianism (Cherulnik et al., 1981) and are preferred as partners (Christie & Geis, 1970).

A related construct called "social adroitness" (Jackson, 1976, 1978) captures the interpersonal aspects of manipulativeness more purely (apart from the intrapersonal aspects such as cynical attitudes) and more subtly and with less jarringly negative connotations. We predicted that people high in manipulativeness would tell more lies overall than low scorers—and especially more self-serving lies—but that they would not tell any fewer altruistic lies. Manipulative people tend to be aware of their own manipulations, and so we also predicted that at the end of the study, when we asked them to compare their lie-telling with other people's, they would report that they lie more often and more successfully than others.

Impression Management

From our perspective on lying as a fact of social life, perhaps the most important individual-differences predictor of lie-telling is a concern with the impressions of oneself that are being conveyed to other people. Two personality constructs—public self-consciousness (Fenigstein, Scheier, & Buss, 1975) and other-directedness (Briggs, Cheek, & Buss, 1980), seem to capture especially well a persistent attention to other people and what they think, as well as a high level of motivation to make a good impression. In contrast to manipulative people who try to mold others to suit their own agendas, people who are publicly self-conscious and other directed try to mold themselves to suit others (Ickes, Reidhead, & Patterson, 1986). We think that one of the ways they do this is by lying. To seem to be the kind of person whom others might like, these people claim to be the kind of person they are not. The "other" orientation of people who are publicly self-conscious and other directed is not an altruistic concern about the needs and desires of other people but, rather, a self-interested concern with the kinds of self-presentations that others might find endearing. Therefore, we predicted that these people would tell more lies overall, and perhaps more lies to benefit themselves, but not more to benefit others. The direction of these predictions is the same as for manipulativeness, but the presumed motivational basis is different (Ickes et al., 1986).

Self-Confidence

People who tell self-centered lies are often trying to appear different than they think they really are (DePaulo et al., 1996). For example, people lie to seem kinder, wiser, more talented, more motivated, and even more moral than they are in fact (cf. Buss & Briggs, 1984). These kinds of self-centered lies may well be spoken by those who cannot accept themselves as they are. They are lies born of insecurity. We think that insecurity also predicts the telling of altruistic lies. When people tell other-oriented lies, they are often claiming to like other people, to agree with them, to approve of their actions, and to appreciate their tastes and their talents more than they actually do (DePaulo et al., 1996). It takes self-confidence to say what you really feel when that is not what the other person wants to hear. This is exactly what people low in self-esteem and high in social anxiety lack. Our prediction, then, was that people low in social self-esteem and high in social anxiety would tell more lies overall, including more self-centered lies as well as more other-oriented lies.

Socialization

If scholars are correct in suggesting that there is widespread public condemnation of lying in Western society, then people who have more strongly internalized that cultural worldview (i.e., those who are more highly socialized) are likely to tell fewer lies overall, and especially fewer lies to benefit themselves, than people who are less highly socialized. Because honesty and integrity are self-definitional to people who most strongly embrace the prevailing cultural wisdom, such people not only may tell fewer lies than others but may realize that they do. To assess individual differences in this domain, we used Jackson's (1976, 1978) Responsibility scale, which was "explicitly designed to measure persons along a dimension of degree of socialization" (Jackson, 1978, p. 73).

A construct related to socialization is social desirability (Crowne & Marlowe, 1960, 1964). Persons higher in social desirability claim unusual virtues (e.g., "I'm always willing to admit it when I make a mistake") and disclaim commonplace shortcomings (e.g., "I like to gossip at times"), and there is some evidence that they actually do possess more of certain qualities deemed desirable in Western culture (McCrae & Costa, 1983). For that reason, such people should tell fewer lies overall and especially fewer selfish lies. However, in addition to the kernel of truth, social desirability includes two kernels of deception (Paulhus, 1991). One is self-deception: Those higher in social desirability believe themselves to be more virtuous than they are in fact (Millham & Jacobson, 1978). The second is "other" deception: Those higher in social desirability describe themselves as more virtuous than they actually believe themselves to be. The latter component is the idea of social desirability as response set. In the present research, a negative correlation between social desirability and rate of lying could be supportive of our substantive prediction that highly socialized

people tell fewer lies, but it could also suggest the possibility that people's reports of their lies are not entirely veridical but are determined at least in part by social desirability concerns.

Sociability

Our perspective on lie-telling as a fact of social life generates the prediction that people who are more drawn to social life are also more inclined to tell lies. This is not simply an artifactual prediction that people who have more opportunities to lie (because they socialize more) will tell more lies, because the measure of lie-telling that we use in our research is rate of lying, that is, the number of lies that people tell, controlling for the number of opportunities they have to tell lies (i.e., the number of social interactions that they report). The social interaction purposes that lying serves—such as making oneself look better and making other people feel better—may be especially appealing to people who are highly sociable. Sociability might predict lying for another reason, too. As people participate in the process of social interaction, including the process of telling lies, lie-telling is likely to become easier, more successful, and more habitual. Sociable people may come to lie more and to notice their lying less. Our prediction is that extraverts and people who are high in social participation will tell more lies than introverts or people low in social participation. When prodded to attend to their lie-telling behavior (as when, in the present research, recording their lies in journals), they will be surprised to discover just how many lies they tell.

Relationship Quality

Although lying and socializing might coexist amicably, lying and relating to others intimately and meaningfully probably do not. People who present themselves inauthentically are unlikely to experience their social interactions as intimate or meaningful. Our nomothetic data are supportive of this prediction. Both college students and people from the community described the interactions during which they lied as less intimate and less pleasant than the interactions during which they told only the truth (DePaulo et al., 1996). In the present study, we predicted that our idiographic results would be consistent with our nomothetic ones. That is, people who characteristically experience their relationships as especially meaningful should also report telling fewer lies. Self-serving lies should be particularly incompatible with intimacy in relationships; therefore, we also predicted that people with especially meaningful relationships would tell especially fewer self-centered lies. However, the kinds of lies that are told to protect other people's feelings and to bolster their self-images may be entirely compatible with intimacy. Therefore, people with gratifying interpersonal relationships may tell relatively more altruistic lies.

To test our predictions, we conducted two studies with two very different samples of participants: college students and a more demographically diverse group of people from the community. Participants completed the 12 individual-differences measures hypothesized to predict lying and then kept diaries every day for a week of all of their social interactions and all of the lies that they told during those interactions.

Method

Participants

Participants in Study 1 were 30 male and 47 female undergraduates who participated in partial fulfillment of a requirement for an introductory psychology course. They ranged in age from 17 to 22 years (M = 18.69, SD = 0.91). Sixty-four were White, 9 were Black, and 4 described themselves as "other" than White or Black. Participants in Study 2 were 30 men and 40 women who were recruited via advertisements posted at a local community college, from lists of people who had taken continuing education courses, and from lists of names selected randomly from the area telephone directory. They ranged in age from 18 to 71 years (M = 34.19, SD = 12.49). Sixty-seven were White and 3 were Black. Other demographic information is based on 53 of the 70 participants (17 were inadvertently given the undergraduate demographic questionnaire, which did not include questions about employment, education, marital status, or children). Of those who did answer the more extended questionnaire, 81% were employed, 57% were married, 47% had children, and 34% had no more than a high school education.

Procedure

There were three phases to the study: an initial introductory session, the 7-day recording period, and a final phase during which participants answered additional questions about their lies and their experiences in the study.

Phase 1: Introduction to the study. The Study 1 participants and the participants from Study 2 who were recruited from the community college initially responded to notices describing the research that were posted on a bulletin board in an academic building. The study was described as one in which they would keep records of their social interactions and communications for 7 days. In Study 1, the notice indicated that participants would receive partial course credit for their participation, and, in Study 2, the notice indicated that participants would be paid $35. Study 2 participants recruited from continuing education lists or from the phone directory were sent letters with the same description of the research, and then they were contacted by telephone about a week later.

All participants attended an initial 90-min meeting, conducted by one or more members of the research team, in which the study and the procedures were explained. In Study 1, these were group sessions attended by 10–15 participants at a time. The Study 2 sessions were conducted individually or in small groups. When participants arrived for this session, they spent the first 20 min answering the personality and demographic questionnaires. The study was then explained in full. Anyone who needed more time to complete the individual-differences measures did so at the end of the session.

Participants were told that they would be recording all of their social interactions and all of the lies that they told during those interactions every day for a week. It was noted that their role in this research was especially important in that they would be the observers and recorders of their own behavior. The investigators explained that they did not condone or condemn lying; rather, they were studying it scientifically and trying to learn the answers to some of the most fundamental questions about the phenomenon. They encouraged the participants to think of the study as an unusual opportunity to learn more about themselves.

The key terms were then explained to the participants. A *social interaction* was defined as "any exchange between you and another person that lasts 10 minutes or more . . . in which the behavior of one person is in response to the behavior of another person." This definition, plus many of the examples used to clarify the definition, was taken or adapted from that used in the initial studies involving the Rochester Interaction Record (RIR; e.g., Wheeler & Nezlek, 1977). We did add

an exception to the 10-min rule: For any interaction in which participants told a lie, they were to fill out a social interaction record, even if the interaction lasted less than 10 min. Copies of our adaptation of the RIR (see subsequent description) were then distributed, and participants were told how to fill out the form.

To explain what participants should count as a lie, it was noted that "a lie occurs any time you *intentionally try to mislead someone.* Both the intent to deceive and the actual deception must occur." More than a dozen examples of lies were given, including examples of kind and unkind lies and lies motivated by many different types of concerns. Participants were urged to record all lies, no matter how big or how small. They were instructed that if they were uncertain as to whether a particular communication qualified as a lie, they should record it. (At the end of the study, two of the investigators independently read through all of the lie diaries and agreed on the few that did not meet the definition and were therefore excluded.) The definition that we gave participants was interpreted broadly as encompassing any intentional attempts to mislead, including even nonverbal ones. The only example of a lie they were asked not to record was saying "fine" in response to perfunctory "How are you?" questions. Participants completed one deception record for every lie that they told. Sample records (see subsequent description) were distributed, and the investigators explained how to fill them out.

Participants were instructed to fill out the forms (social interaction records and deception records) at least once a day; it was suggested that they set aside a particular time or set of times to do so. The forms were then collected by the experimenters at several different times throughout the week. Participants were also given pocket-sized notebooks and urged to carry them at all times. They were encouraged to use these notebooks to write down reminders of their social interactions and their lies as soon as possible after the events had taken place. Then they could use their notes as an aid to their memory if they did not complete their social interaction and deception records until later in the day. The notebooks were not collected.

Several additional steps were taken to encourage the reporting of all lies. First, participants were told that if they did not wish to reveal the contents of any of the lies that they told, then in the space on the deception record in which they were to describe their lie, they could instead write "rather not say." That way, we as investigators would still know that a lie was told, and we would know other information about the lie and the social interaction in which it was told (from the other parts of the records that the participants completed). Participants declined to describe only 1% of their lies in the college sample and none of their lies in the community sample. Second, we instructed participants that if they did not completely remember everything about a lie that they told, they should still fill out as much of the information on the form as they could. Third, we told participants that if they remembered a lie from a previous day that they had not recorded, they should still turn in a form for that lie.

The importance of accuracy and conscientiousness in keeping the records was emphasized throughout the session. As a means of ensuring anonymity, participants chose their own identification number to be used throughout the study. Participants did not write their names on any of the forms.

At the end of the session, the investigators reviewed the amount of time it would take to complete all phases of the study and encouraged participants to terminate their participation at that point if they no longer had the interest or the time to participate fully. They were offered credit or payment even if they chose not to continue. All participants elected to continue.

Before they left, participants were given typed copies of all of the instructions and definitions they had been given during the session. This instruction booklet also included names and phone numbers of members of the research team with whom they had met and whom they could contact at any time with any questions or concerns they might have. Appointments were also made with all of the Study 1 participants to return once more at the end of the 7-day recording period to complete a final set of measures. Study 2 participants were shown an envelope and instructions that would be mailed to them at the end of the study so that they could complete the same measures.

Phase 2: Recording social interactions and lies. During the 7-day recording period that began the day after the introductory session, participants completed a social interaction record for all of their social interactions and a deception record for all of their lies. The social interaction record was adapted from the RIR (Wheeler & Nezlek, 1977). On each record, participants identified themselves and their partners, estimated the length of the interaction, and rated the interaction on measures of intimacy, quality, influence, and modality. (These social interaction variables are not relevant to the present article and are not discussed further.)

Printed on the same page as the social interaction record was the deception record. Participants indicated the initials and gender of the person(s) to whom they told their lie (if there were three targets of the lie or fewer) or the number of men and number of women (if there were more than three targets). Below this was a blank space for participants to "briefly describe the lie" and another blank space for them to "briefly describe the reason why you told the lie." Next were nine 9-point rating scales. Participants rated their degree of planning of the lie on a scale with endpoints labeled *completely spontaneous* (1) and *carefully planned in advance* (9). Then they indicated the importance of not getting caught on a scale ranging from *very unimportant* (1) to *very important* (9). On the next three scales, they reported their feelings before the lie was told, while telling the lie, and after the lie was told; these scales ranged from *very comfortable* (1) to *very uncomfortable* (9). They also rated the seriousness of the lie, on a scale ranging from *very trivial, unimportant lie* (1) to *very serious, important lie* (9), and the target's reaction to the lie, on a scale ranging from *didn't believe me at all* (1) to *believed me completely* (9). Finally, they answered two questions—"How would the target have felt if you told the truth instead of the lie?" and "How would *you* have felt if you told the truth instead of a lie?"—on scales with endpoints labeled *much better if I told the truth* (1) and *much worse if I told the truth* (9).

Phase 3: Additional measures. After the completion of the 7-day recording period, participants were asked to respond to one more set of measures. Participants were given photocopies of each of the deception records they had completed. They answered two questions about each lie: "Was this lie ever discovered?" (participants checked one answer: *no, not yet, don't know,* or *yes*) and "If you could relive this social interaction, would you tell the lie again?" (participants checked either *no* or *yes*).

Next, participants completed a postquestionnaire assessing their experiences in the study. On 9-point scales, they indicated how successful they thought they were at lying (i.e., at not getting caught and arousing no suspicion) and how frequently they thought they had lied relative to what they had expected and relative to other people their age. They also answered several questions assessing their accuracy and diligence in completing the forms (described in DePaulo et al., 1996).

The Study 1 participants returned to the lab to complete these forms. Afterward, they were interviewed by one of the investigators. They were encouraged to ask any questions or voice any concerns and were told once again that their data would be treated confidentially. As part of this debriefing, they were informed that the goals of the research were exactly as described to them during the first session. The investigators tried to determine the extent to which the participants had understood and complied with the procedure and believed the information they had been given about the research. This extensive interview uncovered no problems with the procedure. Therefore, in Study 2, all of the forms from this phase of the study were mailed to the participants, and a written debrief (plus payment) was included in the package. Participants

returned the materials in an addressed and stamped envelope that was also included in the package.

Personality Measures

Of the 12 personality measures, 4 were subscales of the Jackson Personality Inventory (JPI; Jackson, 1976, 1978), 2 were subscales of the Self-Consciousness Scale (Fenigstein et al., 1975), 2 were subscales of the Self-Monitoring Scale (Briggs et al., 1980; Snyder, 1974), 2 were subscales of a relationship quality measure (Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979), and the other 2 were separately developed measures (Christie & Geis, 1970; Crowne & Marlowe, 1960).

The four JPI subscales—Social Adroitness, Self-Esteem, Responsibility, and Social Participation—are all 20-item measures with a true–false format. Because the JPI has been less widely used than most of the other measures, we describe the validity data (later) in somewhat more detail. The subscales of the Self-Consciousness Scale—Public Self-Consciousness (7 items) and Social Anxiety (6 items)—have 5-point rating scales ranging from *not at all characteristic* (0) to *extremely characteristic* (4). The subscales of the Self-Monitoring Scale were Other-Directedness (11 items) and Extraversion (6 items). In the original Self-Monitoring Scale (Snyder, 1974) and in our research, a true–false format was used; Briggs et al. (1980) used a 5-point scale. The relationship quality subscales—Same-Sex Quality and Opposite-Sex Quality—are 7-item measures answered on 9-point scales.

Participants completed several other measures that were embedded in the preceding measures (e.g., the Acting subscale of the Self-Monitoring Scale and the Private Self-Consciousness subscale of the Self-Consciousness Scale). However, because we had no theoretical bases for formulating predictions about these measures, they were not included in our analyses.

Manipulativeness. The two measures of manipulativeness were the Machiavellianism scale (Christie & Geis, 1970) and the Social Adroitness subscale of the JPI (Jackson, 1976, 1978). The Machiavellianism scale is a 14-item measure with items typically answered on a 6-point scale ranging from *disagree strongly* (−3) to *agree strongly* (3). (Because of an error, participants in our studies reported their responses using a true–false format.) The scale was designed to measure an admitted willingness to use manipulative strategies such as lying and ingratiation, a cynical perspective on human nature, and a lack of concern with conventional morality. Items include "Never tell anyone the real reason you did something unless it is useful to do so" and "Anyone who completely trusts anyone else is asking for trouble."

The Social Adroitness scale was designed to capture some of the same interpersonal skill and style of Machiavellianism without the negative connotations. Jackson (1976) described the high scorer as "skillful at persuading others to achieve a particular goal, sometimes by indirect means; occasionally may be seen as manipulative of others, but is ordinarily diplomatic" (p. 10). Examples include "I enjoy trying to get people to do things without letting them know I'm doing it" and "I feel that I have a knack for getting the most out of people." High scorers rate themselves as diplomatic (instead of blunt) and ambitious, and their peers also rate them as ambitious.

Impression management. The two measures of concern with self-presentation were the Public Self-Consciousness subscale of the Self-Consciousness Scale (Fenigstein et al., 1975) and the Other-Directedness subscale of the Self-Monitoring Scale. People who are publicly self-conscious are chronically aware of themselves as social objects. They are concerned about their appearance and the kinds of impressions they convey to other people. Items include "I usually worry about making a good impression" and "One of the last things I do before leaving the house is look in the mirror."

People who score high on the Other-Directedness subscale are also very aware of themselves as social objects, and they tend to look to others for cues to appropriate behavior. Scale items include "Even if I am not enjoying myself, I often pretend to be having a good time" and "In order to get along and be liked, I tend to be what people expect me to be rather than anything else."

Social self-confidence. The two measures of social self-assurance were the Self-Esteem subscale of the JPI and the Social Anxiety subscale of the Self-Consciousness Scale. The Self-Esteem scale was constructed to capture the social and interpersonal aspects of self-esteem. Items include "People seem to be interested in getting to know me better" and "I have never been a very popular person" (reversed). In a multitrait–multimethod analysis of measures of global and social self-esteem (Van Tuinen & Ramanaiah, 1979), the JPI Self-Esteem measure correlated most highly with other measures of social self-esteem, such as the revised Janis–Field Feelings of Inadequacy Scale (Eagly, 1967; Janis & Field, 1959), and positively but less strongly with measures of global self-esteem such as the Coopersmith Self-Esteem Inventory (Coopersmith, 1967).

The Social Anxiety scale measures discomfort in social situations, including embarrassment, stage fright, and shyness. Items include "I don't find it hard to talk to strangers" (reversed) and "I get embarrassed very easily." The measure correlates highly with another carefully validated measure of social anxiety, the Interaction Anxiousness Scale (Leary, 1983, 1991).

Socialization. The two measures of socialization were the Marlowe-Crowne Social Desirability Scale (MCSD) and the Responsibility subscale of the JPI. The MCSD was originally designed to be a measure of a social desirability response bias in self-reports (Crowne & Marlowe, 1960). Sample items include "I always try to practice what I preach" and "I can remember 'playing sick' to get out of something" (reversed).

According to Jackson (1976), a high scorer on the Responsibility subscale "feels a strong obligation to be honest and upright; experiences a sense of duty to other people; [and] has a strong and inflexible conscience" (p. 10). Items include "I am very careful not to litter in public places" and "Sometimes it is too troublesome to do exactly what I promised to do" (reversed). High scorers rate themselves as especially law abiding and are also rated that way by their peers (Jackson, 1978). They report more church attendance and less alcohol use and nonmedical drug use (Jackson, 1978). They are also less inclined to take ethical risks (Jackson, Hourany, & Vidmar, 1972).

Sociability. The two measures of sociability were the Social Participation subscale of the JPI and the Extraversion subscale of the Self-Monitoring Scale. Jackson (1976) described the person who scores high on the Social Participation subscale as someone who "will eagerly join a variety of social groups; seeks both formal and informal association with others; values positive interpersonal relationships; [and is] actively social" (p. 10). Items include "I like to meet as many new people as I can" and "I would rather telephone a friend than read a magazine in my spare time." High scorers rate themselves as more extraverted and are rated as more extraverted by their peers. They also score low on the Social Introversion scale of the Minnesota Multiphasic Personality Inventory (Hathaway & McKinley, 1943; Jackson, 1978).

The Extraversion subscale of the Self-Monitoring Scale includes items such as "I feel a bit awkward in company and do not show up quite as well as I should" and "At a party, I let others keep the jokes and stories going" (both reversed). Scores on this scale correlate negatively with the Shyness Scale (Cheek & Buss, 1981) and positively with a modified version of the Sociability scale of the EASI Temperament Survey (Buss & Plomin, 1975).

Relationship quality. The two measures of relationship quality were the Same-Sex Quality scale and the Opposite-Sex Quality scale, both developed in the process of validating the Profile of Nonverbal Sensitivity, which is a standardized measure of sensitivity to nonverbal cues (Rosenthal et al., 1979). The scales have also been used in subsequent work on interpersonal sensitivity and relationship quality (e.g., Rosen-

thal & DePaulo, 1979). Respondents indicate the degree to which their current same-sex and opposite-sex relationships are warm, honest, enduring, and generally satisfying; the degree to which they understand their friends' feelings and the degree to which their friends understand their feelings; and the quickness with which they make friends. Each scale score is the mean of those seven ratings.

Self-Centered and Other-Oriented Lies

As described in detail in DePaulo et al. (1996), the reasons participants gave for telling each of their lies were coded into the two major categories of self-centered and other oriented. (The kappas were .69 and .68.)

Self-centered lies. Self-centered lies were defined as lies told to protect or enhance the liars psychologically or to advantage or protect the liars' interests (as described subsequently). Also included were lies told to elicit a particular emotional response that the liars desired (e.g., *Lie:* "Exaggerated a problem I'm having with husband." *Reason:* "To get attention.").

The lies told for psychological reasons included lies told to protect the liars from embarrassment, loss of face, or looking bad; from disapproval or having their feelings hurt; or from worry, conflict, or other unpleasantness. They also included lies told to protect the liars' privacy; to make the liars appear better (or just different) than they are; and to regulate the liars' own feelings, emotions, and moods. Examples are as follows.

> *Lie:* "I told her Ted and I still liked each other when really I don't know if he likes me at all." *Reason:* "Because I'm ashamed of the fact that he doesn't like me anymore."
>
> *Lie:* "Lied about keeping a physician's appointment. Said I went to the doctor for a specific reason. That's not really why I went." *Reason:* "To maintain privacy."
>
> *Lie:* "I don't lie." *Reason:* "Wanted to appear more honest."
>
> *Lie:* "Overexaggerated the dullness of my weekend." *Reason:* "To prove a point—I have changed."
>
> *Lie:* "Told her I was sick of guys and never wanted to see one again." *Reason:* "To make myself feel better."

The lies told for reasons of personal advantage included lies told for the liars' personal gain, to make things easier or more pleasant for the liars, or to help them get information or get their way. They also included lies told to protect the liars from physical punishment or to protect their property or assets or their safety. Lies told to protect the liars from loss of status or position or to protect them from being bothered or from doing something they preferred not to do were also included. The following are examples.

> *Lie:* "Told parents typewriter expense would be $50–$60; really $20–$25." *Reason:* "So they'd pity me and send me money."
>
> *Lie:* "Suggested they may want to go to the bookstore." *Reason:* "I wanted them to take me."
>
> *Lie:* "Told him I knew something I did not know." *Reason:* "To obtain secret information."
>
> *Lie:* "Lady on phone asked if a number was my current phone number. I said yes when in fact it isn't." *Reason:* "I want to make it hard for her to find me; they are after me for money."
>
> *Lie:* "Said I was all caught up and doing fine on my reading." *Reason:* "I don't want my teaching assistant to know how far behind I am. She's the one who gives me my grade."
>
> *Lie:* "Told her I couldn't babysit for her because I had to go somewhere." *Reason:* "Did not want to babysit. Her kids are brats."

Other-oriented lies. Other-oriented lies were defined as lies told to protect or enhance other people psychologically or to advantage or protect the interests of others (as described subsequently). Lies told to bother or annoy others or to cause them psychological damage (e.g., *Lie:* "Told him the boss wanted to talk to him, but he really didn't." *Reason:* "So he'd look like a fool.") were not included because only the more positively motivated lies fit our theoretical predictions. Only 1% of the lies in Study 1 and 2.5% of the lies in Study 2 were of the nasty variety.

The other-oriented lies told for psychological reasons included lies told to protect another person from embarrassment, loss of face, or looking bad; from disapproval or having their feelings hurt; or from worry, conflict, or other unpleasantness. They also included lies told to protect another person's privacy; to make other people appear better (or just different) than they are; and to regulate another person's feelings, emotions, or moods. Examples are as follows.

> *Lie:* "Told my roommate I was having a great time at this party." *Reason:* "Didn't want her to feel bad."
>
> *Lie:* "Told her she looked well, voice sounded good, when, in fact, she looks less well than a few weeks ago." *Reason:* "Not to add worry as she undergoes chemotherapy treatments."
>
> *Lie:* "Told her I didn't know what Tricia's paper topic was." *Reason:* "Tricia wanted me not to tell anyone."
>
> *Lie:* "I told her that she was neither promiscuous nor uninhibited to the point of not caring." *Reason:* "So she would not think that she was promiscuous."
>
> *Lie:* "I told her she should have a lot of confidence because she was pretty." *Reason:* "Because she was in a depressed state because she broke up with her boyfriend."

The lies told for another person's advantage included lies told for another person's personal gain, to make things easier or more pleasant for others, to be accommodating, or to help them get their way. They also included lies told to protect others from physical punishment, to protect their property or assets, or to protect their safety. Lies to protect others from loss of status or position or to protect them from being bothered or from doing something they preferred not to do were also included. The following are examples.

> *Lie:* "Lied about cost per square foot." *Reason:* "To make money for the company."
>
> *Lie:* "Told them that it didn't matter what we did that night." *Reason:* "To be agreeable."
>
> *Lie:* "Insisted I drive her to a party because it wouldn't be an inconvenience." *Reason:* "She is a terrible driver and a threat to herself and others."
>
> *Lie:* "My roommate wasn't home." *Reason:* "She's screening calls."

Results

Personality Measures: Intercorrelations and Sample Comparisons

The correlations between the two measures of a given personality dimension (mean r = .43) were always bigger in absolute

value than the mean correlations between those measures and the measures of all of the other dimensions (mean $r = .22$). Thus, the pattern of correlations supported our theoretically based grouping of the measures.

Consistent with theoretical predictions (e.g., Elkind & Bowen, 1979; Simmons, Rosenberg, & Rosenberg, 1973) and empirical indications (Tice, Buder, & Baumeister, 1985), the late adolescents were higher in public self-consciousness ($M = 19.33$, $SD = 4.89$) than the adults from the community ($M = 16.70$, $SD = 4.35$), $t(144) = 3.42$, $p < .001$. Also consistent with previous research (Reis, Lin, Bennett, & Nezlek, 1993) are the findings that the college students were more sociable than the community members: They scored significantly higher on social participation (college $M = 10.78$, $SD = 4.94$; community $M = 8.24$, $SD = 4.65$), $t(144) = 3.18$, $p < .01$, and marginally higher on extraversion (college $M = 3.94$, $SD = 1.68$; community $M = 3.39$, $SD = 1.94$), $t(144) = 1.85$, $p = .07$. The college students also scored higher on both measures of manipulativeness: Machiavellianism (college $M = 10.10$, $SD = 2.90$; community $M = 8.20$, $SD = 3.38$), $t(144) = 3.65$, $p < .001$, and social adroitness (college $M = 11.25$, $SD = 3.37$; community $M = 10.18$, $SD = 4.12$), $t(144) = 1.73$, $p = .09$. Finally, they scored higher on both measures of relationship quality: same-sex quality (college $M = 6.90$, $SD = 1.03$; community $M = 6.43$, $SD = 1.19$), $t(144) = 2.58$, $p = .01$, and opposite-sex quality (college $M = 6.70$, $SD = 1.23$; community $M = 6.25$, $SD = 1.28$), $t(144) = 2.19$, $p = .03$. The two groups did not differ significantly on self-esteem, social anxiety, other-directedness, or social desirability.

To determine whether the differences between the younger (college) and older (community) groups would be replicated within the community sample, we correlated the 12 personality variables with participant age. The results for responsibility were consistent such that the older community members scored higher than the younger ones ($r = .28$, $p = .02$). The comparable correlation for social desirability was nearly significant ($r = .21$, $p = .09$). The results for relationship quality were inconsistent with the group comparisons: The older community members rated their relationship quality more positively than did the younger ones ($r = .24$, $p < .05$, for same-sex quality and $r = .25$, $p = .04$, for opposite-sex quality). None of the other correlations with age differed significantly from zero.

Overall Rate of Lying

Correlations. Participants' overall rate of lying was computed by dividing the total number of lies that they reported telling over the course of the week by the total number of social interactions they reported. As we reported previously (DePaulo et al., 1996), the college students told 0.31 lies per social interaction and the community members told 0.20. One college student and 6 community members told no lies at all.

Table 1 shows the correlations between rate of lying and each of the 12 personality variables for the two samples. We also combined the results of the two studies using the method of adding Z values (Mosteller & Bush, 1954; Rosenthal, 1978); the resulting combined p values are also shown in Table 1. One-tailed results are typically discussed and reported in reports of meta-analyses; to be conservative, however, we use two-tailed p values.

We predicted that people who are more manipulative would tell more lies. All four correlations were in the predicted direction. For the college students, the correlation with social adroitness was statistically significant, but the correlation with Machiavellianism was not. Similarly, for the community members, the correlation with social adroitness was significant and the correlation with Machiavellianism was nearly significant. The combined results were significant for both Machiavellianism and social adroitness. Overall, then, our prediction was well supported: More manipulative people lie more than less manipulative people.

We also predicted that people who are more highly concerned with impression management would tell more lies. Again, all four correlations were in the predicted direction. For the community members, both correlations—with public self-consciousness and with other-directedness—were significant. Although the comparable correlations were not significant for the college students, the combined results across studies were significant for both measures. Therefore, our prediction that a concern with self-presentation would predict rate of lying was also fairly well supported.

There was no support for our prediction that people low in social self-confidence would tell more lies. Neither self-esteem nor social anxiety correlated with rate of lying, nor did either of the combined results reach significance.

Correlations with responsibility provided one test of our prediction that more highly socialized people would tell fewer lies. Although the correlations were not significant for either sample, they were in the predicted direction, and the combined p level across studies was nearly significant. The correlation of rate of lying with social desirability was negative and marginally significant for the community sample, although it was positive and very small for the college students. Overall, the results provide weak support for the prediction that more highly socialized people would tell fewer lies.

All four correlations were in the direction of our prediction that highly sociable people tell more lies. The results for social participation, however, were not significant. For extraversion, the results for the individual studies were not significant, but the combined p level across the studies was significant. Overall, then, there was some limited support for our hypothesis that sociability predicts lie-telling.

Finally, we predicted that people who report higher quality same-sex and opposite-sex relationships would tell fewer lies. All four correlations were in the predicted direction; for opposite-sex quality, however, they were not even close to significant. For same-sex quality, the results for the individual studies were not significant, but the combined p level across the studies was significant. Our prediction, then, that people with more meaningful relationships tell fewer lies was supported primarily for same-sex relationships.

We also conducted analyses in which we controlled for a possible social desirability response style by partialing the MCSD out of the correlations between rate of lying and the 11 remaining personality measures. Controlling for social desirability

Table 1
Correlations Between Number of Lies per Social Interaction and the 12 Personality Variables

Variable	College		Community		Combined
	r	*p*	*r*	*p*	*p*
Machiavellianism	.119	.307	.228	.058	.039
Social adroitness	.303	.008	.240	.046	.001
Public self-consciousness	.122	.292	.262	.028	.023
Other-directedness	.077	.507	.396	.001	.004
Self-esteem	.126	.279	.034	.779	.335
Social anxiety	.098	.398	−.033	.784	
Social desirability	.041	.725	−.208	.084	
Responsibility	−.160	.167	−.157	.195	.058
Social participation	.100	.389	.142	.240	.150
Extraversion	.183	.114	.198	.101	.023
Same-sex quality	−.194	.093	−.166	.170	.031
Opposite-sex quality	−.065	.578	−.032	.791	.561

Note. All *p* values are two-tailed.

weakened a few of the results for the community sample.[1] However, as we discuss later, the partialing procedure may have partialed out a bit of substance along with the style.

To determine whether any of our results were different for men and women, we also computed all correlations separately by gender and tested for gender differences. For the college student study, only one correlation differed significantly by gender. For men, the correlation between Machiavellianism and rate of lying was .436 (p = .018), whereas, for women, it was −.066 (p = .661). A test of the difference between these correlations produced a Z value of 2.16 (p = .031). For the community study, only the correlation with public self-consciousness differed significantly by gender (r = .494, p = .001, for women and r = −.115, p = .546, for men; Z = 2.580, p = .01).

Regressions. To assess whether some combination of the personality variables was more successful in predicting rate of lying than any single variable alone, we used a forward selection multiple regression procedure such that all 12 of the personality variables, as well as participant gender, were treated as potential predictor variables. For all regressions with both samples, the personality variables were first standardized and participant gender was coded (men = −1, women = 1). In the community study, we also included participant's age (also standardized) as a possible predictor variable. Consistent with the correlational results, for the college student study the resulting model included only social adroitness, b = .080, R^2 = .092, $F(1, 74)$ = 7.46, p = .008. (The intercept for this model was .310.) Thus, for the college sample, social adroitness significantly predicted rate of lying such that students who were one standard deviation above the mean on social adroitness would be predicted to tell a lie in every two to three interactions (the rate of lying would be .390), whereas a person one standard deviation below the mean on social adroitness would be predicted to tell a lie in every four interactions (the rate of lying would be .230). No other predictor variable accounted for significant variation in rate of lying beyond that explained by adroitness.

For the community study, the model included both other-directedness and participant gender; these two variables accounted for 23% of the variation in rate of lying, R^2 = .227, $F(2, 66)$ = 9.55, p < .001. The regression coefficient (b) for the standardized measure of other-directedness was .111, $t(66)$ = 4.022, p < .001; for gender, the coefficient was .050, $t(66)$ = 1.82, p = .073. (The intercept was .201.) Thus, those participants who were higher in other-directedness told more lies relative to the number of interactions they had. Gender explained additional variation in rate of lying over and above that accounted for by other-directedness: Women's rate of lying was higher (by about one lie in every 10 social interactions) than men's after differences in other-directedness had been controlled. In sum, the results of the regression analyses provide qualified support for our claim that two of the most important personality predictors of lie-telling are manipulativeness and a concern with impression management.

Self-Centered Lies

Correlations. According to our formulation, personality should predict not just overall rate of lying but also the kinds of lies that people tell. To learn whether certain kinds of people, when they do lie, tell disproportionately more self-centered lies, we computed a self-centered lying variable that was defined as the total number of self-centered lies divided by the total number of all lies. The correlations of that variable with each of the

[1] Specifically, the correlations with manipulativeness, responsibility, and public self-consciousness were somewhat weakened. The partial correlations were .163 (p = .180) for Machiavellianism, .205 (p = .090) for social adroitness, and −.079 (p = .518) for responsibility. (For social adroitness, when the results were combined across samples with the partial correlations instead of the zero-order ones, the combined two-tailed p level was still significant, p = .002. For Machiavellianism, the new combined two-tailed p level was .080; for responsibility, it was .127.) For public self-consciousness, the partial correlation (.226) was nearly significant (p = .061). (The combined p level based on the partial correlations remained significant, p = .029.) The partial correlation with extraversion was very slightly strengthened to .208 (p = .086). None of the other zero-order correlations were significant or nearly significant, and none of them became so after we partialed out social desirability.

12 personality variables are shown in Table 2, along with the combined p levels.

We predicted that manipulative people, people especially concerned with self-presentation, and people lacking in social self-confidence would tell more self-centered lies, whereas highly socialized individuals and people with high-quality personal relationships would tell fewer self-centered lies. All four of the correlations with manipulativeness were in the predicted direction (although one was very close to zero). The correlation with Machiavellianism for the college sample was significant, as was the combined p level for Machiavellianism across samples. Therefore, there was some support for the prediction that manipulative people would tell especially more self-serving lies.

The results for impression management were in the predicted direction for three of the four correlations and nearly significant in the community sample for other-directedness. Overall, however, support for the prediction that people concerned with impression management would tell more self-centered lies was weak. There was no support for our prediction that socially insecure people would tell more self-centered lies.

Our prediction that highly socialized people would tell fewer self-serving lies was fairly strongly supported when responsibility was the measure of socialization. For social desirability, however, the correlations were essentially zero (and, therefore, we do not report results that partial out this variable).

Support for our prediction about quality of relationships was very strong for same-sex quality but trivial for opposite-sex quality. People who describe their same-sex relationships as very meaningful tell fewer self-serving lies, but the same is not true for those who describe their opposite-sex relationships that way.

We computed all correlations separately by gender and tested for gender differences. For the college student study, there were none. For the community sample, the correlations with self-centered lying were significantly different for men and women only for social adroitness ($r = .504$, $p < .01$, for men and $r = -.076$, $p = .65$, for women). The Z value for the difference between the correlations was 2.35 ($p = .02$).

Regressions. Using a forward selection procedure, we regressed the 12 personality variables plus participants' gender (and, for the community sample, participants' age) on the proportion of self-centered lies that participants told. For the college student study, the model included 5 variables and accounted for more than 22% of the variance in the proportion of self-centered lies told, $R^2 = .225$, $F(5, 69) = 4.01$, $p < .01$. As predicted, people higher in public self-consciousness told more self-centered lies, $b = .069$, $t(69) = 2.07$, $p = .042$, whereas highly responsible people, $b = -.069$, $t(69) = 2.25$, $p = .028$, and people with high-quality same-sex relationships, $b = -.102$, $t(69) = 3.12$, $p = .003$, told fewer self-centered lies. Contrary to predictions, however, social anxiety tended to predict self-centered lying negatively in the regression analysis, $b = -.062$, $t(69) = 1.79$, $p = .073$, whereas social desirability was positively (although not significantly) predictive of telling self-centered lies, $b = .053$, $t(69) = 1.60$, $p = .115$. For this regression equation, the intercept was .457. Thus, a person who was high in public self-consciousness and low in responsibility and who had poor same-sex relationships was especially likely to tell self-centered lies. Machiavellianism, although relating to rate of self-centered lying in the univariate analysis, was not a significant predictor of self-centered lying after quality of same-sex relationships had been taken into account.

For the community study, the regression results mirrored the correlational results. The model included two variables, both in the predicted direction, and accounted for about 11% of the variation in proportion of self-centered lies, $R^2 = .112$, $F(2, 60) = 3.79$, $p = .028$. Participants with high-quality same-sex relationships tended to tell fewer self-centered lies, $b = -.080$, $t(60) = 2.11$, $p = .04$, and other-directed people tended to tell more self-centered lies, $b = .059$, $t(60) = 1.54$, $p = .13$. (The intercept for this equation was .563.)

In sum, when all personality variables were entered into regression analyses, quality of same-sex relationships emerged as an important predictor of (less) self-centered lying for both samples, as it had in the zero-order correlational analyses. Consistent with our formulation, concern with impression manage-

Table 2
Correlations Between Percentage of Lies That Were Self-Centered and the 12 Personality Variables

Variable	College r	College p	Community r	Community p	Combined p
Machiavellianism	.296	.010	.153	.227	.007
Social adroitness	.020	.863	.152	.229	.331
Public self-consciousness	.142	.224	.083	.516	.187
Other-directedness	−.028	.810	.215	.087	
Self-esteem	−.055	.639	.027	.834	
Social anxiety	−.026	.822	.025	.842	
Social desirability	.036	.762	−.056	.660	
Responsibility	−.249	.031	−.198	.118	.009
Social participation	−.156	.182	−.077	.547	.170
Extraversion	.018	.879	.097	.444	.632
Same-sex quality	−.314	.006	−.276	.027	.000
Opposite-sex quality	−.044	.704	−.044	.732	.610

Note. All p values are two-tailed.

ment predicted more self-centered lying, and, for the college sample, responsibility predicted less of it.

Other-Oriented Lying

Correlations. To learn whether certain kinds of people, when they do lie, tell disproportionately more other-oriented lies, we computed an other-oriented lying variable that was defined as the total number of other-oriented lies divided by the total number of all lies. Table 3 shows the correlations between that variable and the 12 personality variables, as well as the p levels for the results combined across studies. We predicted only that people low in social self-confidence and people with high-quality interpersonal relationships would tell more other-oriented lies. We were wrong about self-confidence; there was no discernible relationship between self-esteem or social anxiety and the telling of other-oriented lies. There was some support for our other prediction. When people with higher quality same-sex relationships told lies, proportionately more of those lies were altruistic. The correlation was significant for the college sample and for the results that were combined across studies. Once again, quality of opposite-sex relationships did not predict lying.

When we computed the correlations separately by gender and tested for gender differences, we found no significant differences in the community study. In the college student study, only the social adroitness correlations were significantly different for men and women ($r = .299$, $p = .12$, for men and $r = -.231$, $p = .12$, for women). The Z value for the difference between the correlations was 2.19 ($p = .03$).

Regressions. We regressed the 12 personality variables, plus participants' gender (and, for the community sample, participants' age), on the proportion of other-oriented lies that participants told. For the college study, the model included as predictors same-sex quality and participant gender and accounted for 15% of the variation in proportion of other-oriented lies told, $R^2 = .150$, $F(2, 72) = 6.36$, $p < .01$. The gender coefficient, $b = .149$, $t(72) = 2.63$, $p < .01$, indicates that women were much more likely than men to tell other-oriented lies. (The intercept was .015.) In addition, people with higher quality same-sex relationships, $b = .046$, $t(72) = 1.67$, $p = .10$, told more other-oriented lies. There was no acceptable model for the community study.

Self-Perceptions of Lying

We predicted that manipulative people would describe themselves as especially successful liars and would also accurately report that they lie more often than other people. We predicted that highly socialized people would report that they lie less than other people. We also predicted that highly sociable people would be surprised by how often they lied, as indicated by their reports at the end of the study that they lied more frequently than they expected. Table 4 shows the correlations of the 12 personality variables with participants' perceptions of their success at lying and their estimates of how often they lie relative to other people.

As we predicted, manipulative people did see themselves as more successful liars than others. The combined results across studies were significant for both Machiavellianism and social adroitness, and the individual correlations were significant or nearly so for Machiavellianism for the college sample and for social adroitness for the community sample. We also found that across studies, people high in social self-confidence, as measured by both scales, thought that they were more successful liars. Although we had not specifically predicted this finding, it is consistent with a large literature showing that people with high self-esteem and low social anxiety evaluate their own interpersonal skills more positively (Baumeister, 1993; Leary, 1983). Across studies, extraverts also described themselves as more successful liars than introverts. This, too, was an unexpected but not implausible finding.

There was also some support for our predictions that manipulative people would report that they lie more than others and that highly socialized people would report that they lie less than others. For Machiavellianism and social adroitness, the results

Table 3
Correlations Between Percentage of Lies That Were Other Oriented and the 12 Personality Variables

Variable	College r	College p	Community r	Community p	Combined p
Machiavellianism	−.109	.352	.051	.686	
Social adroitness	−.159	.173	.021	.871	
Public self-consciousness	−.132	.258	−.004	.976	.412
Other-directedness	−.082	.487	−.120	.345	.246
Self-esteem	.037	.751	−.086	.499	
Social anxiety	−.041	.728	.053	.678	
Social desirability	−.009	.941	.038	.767	
Responsibility	.071	.548	.073	.565	.405
Social participation	.156	.181	.069	.589	.184
Extraversion	−.022	.854	−.027	.832	.779
Same-sex quality	.261	.024	.151	.232	.014
Opposite-sex quality	−.053	.652	.109	.393	

Note. All p values are two-tailed.

Table 4
Correlations Between Self-Ratings of Success at Lying and Lying More Than Others and the 12 Personality Variables

	Success at lying					Lied more than others				
	College		Community		Combined	College		Community		Combined
Variable	*r*	*p*	*r*	*p*	*p*	*r*	*p*	*r*	*p*	*p*
Machiavellianism	.218	.059	.113	.352	.046	−.030	.794	.266	.026	
Social adroitness	.062	.603	.278	.020	.044	.170	.142	.387	.001	.001
Public self-consciousness	.009	.940	.033	.786	.807	.042	.720	.299	.012	.042
Other-directedness	−.057	.625	.226	.060		.202	.080	.198	.101	.016
Self-esteem	.075	.519	.345	.003	.012	.120	.301	.182	.132	.072
Social anxiety	−.248	.031	−.152	.210	.016	−.099	.394	.004	.977	
Social desirability	−.059	.614	−.003	.984	.711	−.109	.348	−.149	.219	.126
Responsibility	−.033	.778	−.155	.201	.270	−.139	.232	−.202	.094	.042
Social participation	−.231	.044	.150	.216		.139	.230	.056	.648	.242
Extraversion	.142	.221	.373	.002	.002	.294	.010	.204	.090	.003
Same-sex quality	.015	.897	−.093	.444		.189	.103	−.077	.526	
Opposite-sex quality	.090	.441	−.058	.632		.050	.666	−.042	.728	

Note. All *p* values are two-tailed.

were significant for the community sample; for social adroitness, they were also significant in the combined analysis. For responsibility, the results were significant or nearly so for the community sample and in the combined analyses. The correlations with social desirability were in the predicted direction but were not significant. Although we had not predicted any other correlates, we found that people who are especially concerned with impression management believe that they lie more than other people, as do extraverts. In sum, people's perceptions of their relative standing on the lie-telling dimension corresponded fairly well with their actual standing. Manipulative people, people who are especially concerned with self-presentation, and highly sociable people all tend to lie more often than other people and to realize that they do. Highly socialized people tend to lie less than others, and they know that, too.

We predicted that only highly sociable people would report, at the end of the study, that they had lied more often than they expected. This prediction was supported only for the extraverts in the college study ($r = .309$, $p = .007$). For social participation in the college student sample, the correlation was in the predicted direction ($r = .171$) but was not significant ($p = .140$). For the community study, both correlations were in the opposite direction, and neither was significant. There were no other significant correlations with the variable of lying more frequently than expected.

Characteristics of the Lies

For each participant, we calculated the mean of his or her ratings of the characteristics of the lies for each of the 11 variables: the degree to which he or she had planned the lie; importance of avoiding detection; distress before, during, and after the telling of the lie; seriousness of the lie; degree to which the other person seemed to believe the lie; degree to which he or she was trying to protect the other person or themselves with the lie; whether the lie had been discovered by the end of the study; and whether he or she would tell the lie again. We correlated each of these variables with the 12 personality variables. Although several individual correlations were significant, only one correlation was significant or nearly significant in both samples and in the same direction. Machiavellian people were more likely to say that if they could relive the situations, they would tell their lies again ($r = .220$, $p = .059$, for the college sample and $r = .268$, $p = .034$, for the community sample). Although this finding fits well with the theory and research on Machiavellianism, it is possible that it is simply a chance finding.

Discussion

As social psychologists, we could have at least entertained the possibility that personality would be of no consequence in predicting lie-telling in everyday life. Perhaps lies are elicited by situational presses or by the behaviors of particular other people. We do think that certain situations and people elicit lying. But we expected personality to predict lying as well. Our perspective on lying is that it is an everyday social interaction process used to accomplish fundamental social interaction goals such as managing impressions and influencing other people. Personality dimensions that are relevant to those goals, such as manipulativeness and a chronic concern with self-presentation, should predict lie-telling in everyday life.

Individual-Differences Predictors of Everyday Lying

Manipulativeness. Perhaps the most stereotypical view of personality and lying is that liars are selfish, scheming, and manipulative. When the results for Machiavellianism and social adroitness are considered by themselves, our data do little to debunk that view. In each individual study and in the combined analysis, the more socially adroit people told significantly more lies than the less socially adroit people. In the regression analysis for the college students, social adroitness was the one factor that significantly predicted the overall rate of lying in everyday life. Machiavellian people also told more lies (although, for the col-

lege students, this was true only for the men), and they were especially inclined to tell self-serving lies.

We also thought that manipulative people would know that they lie more than other people and would be confident of their lie-telling skills. These predictions, too, were generally supported. After a week of observing and recording their own lie-telling behavior (but, of course, not anyone else's), the socially adroit individuals in both studies and the Machiavellian types in the community study reported that they thought they told more lies than other people, and, across studies, both the Machiavellians and the socially adroit participants said that they believed themselves to be especially successful liars.

In many creative studies of Machiavellianism (e.g., Christie & Geis, 1970; Fehr, Samsom, & Paulhus, 1992; Geis, 1978) and a smaller number of studies of social adroitness (e.g., Jackson, 1976, 1978), manipulative individuals have been found to be more successful than others at persuading people and reaping competitive rewards. Our data lend added plausibility to the suggestion that one of the ways that manipulative people get what they want is by lying. What is impressive about these people is that at the same time that they are telling self-serving lies and getting their way, they still manage to be admired and even liked.

Impression management. Most central to our view of lying as an everyday social interaction process is the prediction that people who are most concerned about the impressions they convey to other people will be most likely to tell lies. Across both studies (but especially in the community study), people who were publicly self-conscious and other directed did indeed tell more lies than people who were less aware of themselves as social objects. Our prediction that they would tell especially more self-centered lies was supported only in the regression analyses: In the undergraduate study, public self-consciousness significantly predicted the telling of self-centered lies, and, in the community study, other-directedness did so, although less definitively. Although we had not predicted this, we also found that people who are concerned with the impressions they make on other people know that they lie more than others.

Social self-confidence. There was no evidence whatsoever in support of our predictions that people low in self-esteem and high in social anxiety would tell more total lies, more self-centered lies, or more other-oriented lies than their counterparts. We had argued that when people tell self-centered lies, they are often claiming a different and more impressive identity than they think they have earned, and we had suggested that these exaggerated claims are motivated by insecurity. Perhaps some of them really are. Others, however, may follow from the self-assurance that emboldens people to take a chance at claiming virtues that they do not really believe they possess. In a similar manner, the telling of some altruistic lies may be motivated by insecurity, and other lies may be motivated by social self-confidence. Our data suggest that sweeping generalizations about confidence and lie-telling are unlikely to be supported. The relationships are probably nuanced and complex, and we think they will be most precisely articulated by the fine-pointed pen of experimental research.

Socialization. Whereas manipulative people see lying as an acceptable means of getting what they want, and people concerned with self-presentation see it as a way of creating the impressions of themselves that they long for but cannot claim by simply behaving honestly, people who are highly socialized into the cultural wisdom of their society may simply see lying as wrong. The Responsibility scale that we used picks out people who are best described as "responsible, honest, ethical, incorruptible, scrupulous, dependable, conscientious, reliable, stable, [and] straightforward" (Jackson, 1976, p. 10). True to their descriptors and our predictions, these people did in fact tell somewhat fewer total lies, especially fewer self-serving lies, and they also knew that they lied less often than other people. These people are the practitioners and defenders of conventional morality. We found more of them among the community members than among the college students, and, within the community sample, they were more likely to be the older rather than the younger members.

Sociability. We thought that the functions that lying serves in everyday social interaction would be particularly important to people who are especially sociable and that such people would therefore lie at a higher rate than less sociable people. Over time, sociable people might lie more often because lying has become more practiced and more habitual. As such, it might also become less noticed. Hence, we also predicted that when sociable people are pushed to attend to their lie-telling behavior, as they were in the present investigations, they would be surprised at how often they lie and would report that they told more lies than they had expected. These predictions received some support, but it was limited. When the results of both studies were combined, extraverts did report a higher rate of lying than introverts. In the college study (but not the community study), extraverts also reported that they lied more often than they expected. Of course, we cannot know from these data alone whether the mechanisms we postulated were, in fact, responsible for the effects.

Relationship quality. Across both studies and all three measures of lying—total lying, self-centered lying, and other-oriented lying—the quality of people's same-sex relationships was the most consistent predictor of lying. People who described their same-sex relationships as warm, enduring, and satisfying told fewer lies overall, and especially fewer self-centered lies, than people who described their same-sex relationships in less glowing terms. We are intrigued by the fact that the quality of same-sex relationships was so reliably linked to lying when the quality of opposite-sex relationships was so consistently irrelevant to lying. We entrust the solution of this puzzle to future researchers.

Overall profile. The personality profile of the liar that has emerged from this research fits well with our perspective on lying as an everyday social interaction process. People who tell more lies than others are people who care more than others about the impressions they are creating in social life. They are also sociable sorts who are more likely to be extraverts than introverts. Although it is also the case that liars are manipulators, they are smooth and even likable manipulators rather than abrasive and alienating. In some ways, then, liars seem to be able participants in social life. But our data also suggest important qualifications to this lie-tolerant picture. For example, people who lie more than others have less gratifying same-sex relationships, and they are also less responsible. It is clear that our data cannot answer questions about the direction of causality in our

findings, but it is equally clear that those questions are important and worth pursuing.

We think it is also important to acknowledge that the individual-differences predictors we have documented are the predictors of everyday lies, the vast majority of which are little lies (DePaulo et al., 1996). The personality correlates of serious lies may be very different.

Are Liars Lying About Their Lies?

To learn about the personality predictors of lying across the broad spectrum of everyday life, there is simply no methodological alternative to asking people to report their own lies. Only liars have a chance at recognizing and reporting all instances in which they deliberately mislead other people. But this methodology immediately raises the question of whether people's reports of their lies can be believed.

We took great pains to elicit accurate and conscientious reporting from our participants. We repeatedly emphasized the importance of accuracy and thoroughness, we described their role as more akin to that of a co-investigator than objects of investigation, we protected the privacy of their reports, and we remained continuously available to them to pick up their diary entries throughout the week and to answer their questions. We also conducted careful interviews at the end of the study to probe participants about the accuracy and completeness of their records, and the results of those efforts were reassuring (DePaulo et al., 1996).

Another way that we addressed the issue of self-report bias was to include a widely used measure of socially desirable responding, the MCSD. The correlation of this measure with the total number of lies told by the undergraduates was essentially zero. The correlations with the proportion of all lies that were self-centered and the proportion that were other oriented were also indistinguishable from zero in both studies. Only in the community study did the relationship between MCSD score and the total number of lies approach significance. The community members who scored higher on social desirability reported telling somewhat fewer lies. When we controlled for MCSD score in that study, a few results were somewhat weakened (such as the correlations with manipulativeness and responsibility), but others (such as the correlation with other-directedness) remained strong. We think that there were good theoretical reasons for the somewhat smaller correlations that occurred when MCSD score was partialed out of manipulativeness and responsibility. For example, a willingness to embrace socially undesirable attitudes such as a view of others as objects of manipulation is definitional to the construct of Machiavellianism. When that willingness is partialed out, so too is some of the theoretical foundation on which we based our predictions. Similarly, the Responsibility scale is a measure of degree of socialization. To some degree, so is the MCSD. So again, when MCSD score is partialed out of the correlation of responsibility with lying, some of the substantive basis for the correlation is partialed out, too.

Overall, then, we think that the MCSD results provide scant basis for the concern that people's reports of their lies were driven more by a motivation to look good than by their actual lie-telling behavior. Still, it is evident that our interpretation of the MCSD results is compromised by the multiple meanings and implications of the measure. Hindsight tells us that we should have used a purer measure of socially desirable responding, if indeed such a measure exists (McCrae & Costa, 1983).[2]

College Students and Community Members: Different Personality Profiles and Correspondingly Different Rates of Lying

In our other, related work (DePaulo et al., 1996), we found that the community members lied less than the college students on every measure of lying. They told fewer lies per day (0.97 vs. 1.96) and fewer lies per social interaction (0.20 vs. 0.31), and they lied to a smaller percentage of the people with whom they interacted in their day-to-day lives (30% vs. 38%). Furthermore, within the community sample, the older people lied less frequently than the younger people ($r = -.24$, $p = .044$). Interestingly, almost all of the ways in which the college students differed from the community members in personality were consistent with the finding that the college students lied more than the community members. The college students were more manipulative; they scored higher than the community members on Machiavellianism and social adroitness. They also seemed more concerned with impression management in that they scored higher on public self-consciousness. They were also more extraverted than the community members and less responsible. All of these differences predict higher rates of lying. Only the results of same-sex quality are inconsistent with this argument; college students reported higher quality same-sex relationships than the community members did, but same-sex quality predicts lower rates of lying. Even this one exception was tempered by the finding of a significant positive correlation with age for the community members. Thus, even though the community members reported lower quality same-sex relationships overall than did the college students, the older community members reported higher quality same-sex relationships than the younger ones (which, again, predicts less lying).

Because the community members differed from the undergraduates in so many ways other than their age, we cannot confidently attribute any of these effects to age. However, the findings for responsibility are especially suggestive because they were consistent across every level of analysis. People who were more responsible told fewer lies than people who were less responsible across the two samples. The community members were more responsible than the college students and told fewer lies, and the older community members were more responsible than the younger ones, and they also told fewer lies.

When 1,500 Lies Are Not Enough

The two studies we have reported are the first to examine the personality predictors of lie-telling across the vast domain of

[2] Another potential bias in our results may result from the element of self-selection inherent in the manner in which our sample was acquired. In both studies, participants responded to notices describing the research as a 7-day diary study. As Stone, Kessler, and Haythornthwaite (1991) have noted, people who volunteer to participate in diary research may be unrepresentative of the larger population.

everyday life. We are encouraged by the consistency of our findings across two strikingly different groups of people: a young, highly intelligent, and somewhat privileged group of undergraduates and a group that was far more diverse in age, education, income, and life experience. The two groups also differed markedly on 8 of the 12 individual-differences measures. Still, the two distinct sets of people told the same basic story about personality and lying: Lies are told by people who care deeply about what other people think of them. They are also told by people who are extraverted and manipulative. Lies are less likely to be told by people who are responsible and who experience gratifying same-sex relationships.

The results we have reported are based on almost 150 people and more than 1,500 lies. Still, we think that the more than 1,500 lies we collected were not quite enough. The categorization of lies as self-centered or other oriented captured a distinction of long-standing importance in philosophy and ethics, and one that was central to our own formulation of the relationship between personality and lying. But it is only one of the many psychologically meaningful ways in which lies can be classified. In our other, related work (DePaulo et al., 1996), we developed several different taxonomies of lies, and we also described more differentiated subtypes of self-centered and other-oriented lies. We have not reported the results of any of those more fine-grained classifications of lies in the present article because, at the level of the individual participant, there simply were not enough instances of most of the specific categories. In future research, it would help to extend the reporting period by at least an additional week to obtain more stable estimates of more different kinds of lies.

Small Effects, Big Implications

Although many of our results were consistent with predictions and statistically significant, the size of our effects was generally rather modest. It is important, then, to be appropriately cautious in drawing implications from these data. At the same time, however, we think that the prediction of everyday lying from personality perfectly fits Abelson's (1985) "variance explanation paradox" in which "a little is a lot." In Abelson's example, the hitting skill (batting average) of a baseball player accounts for a mere one third of 1% of the variance in whether that player will get a hit in a single time at bat. However, over the course of a season, that puny percentage of the variance cumulates, and differences in batting averages among different players become highly consequential. Because lying is indeed an everyday event, even personality variables that account for just a small amount of the variance in lie-telling can be of great consequence over time.

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