EFFECTS OF MOTIVATION TO LIE ON

MISREPRESENTATION AND MEMORY ERRORS

by

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Effects of Motivation to Lie on Misrepresentation and Memory

Imagine a young, untenured professor having coffee with a senior professor. During their chat, the senior professor mentions her strong support for a controversial proposal. The young professor remembers giving the proposal a low rating on an earlier campus survey. When asked her opinion, the young professor lies and says she also strongly favored the proposal. What effect would this lie have on her memory of her original rating of the proposal? Does her strong motivation to impress her colleague influence the extent of her lie and subsequent memory? Research from source monitoring framework (SMF) indicates that people can confuse false events with events that they only imagine (Johnson, Hashtroudi, & Lindsay, 1993; Johnson & Raye, 1981).

People can confuse their own past actions with imagined actions by incorporating false information about those actions into memory. One way people incorporate false information into memory is through lying. When motivated to lie to an attractive opposite-sex person, for example, people are likely to misrepresent their previous attitude reports and subsequently misrecall those reports as being commensurate with their lies (Brady & Lord, in press). What is unclear is whether motivations for lying other than a target person's physical attractiveness can also affect the extent to which liars fool themselves. In addition to the target person's physical attractiveness as a motive to lie, people may also be highly motivated to lie in order to seek a potential romantic partner or to make a good impression on someone who has the ability to confer a meaningful reward. Given the relevance of motivated lying to source monitoring and memory confusion, the present experiments examined whether different motivations to lie would affect the extent to which people lie,

and in turn affect how much they subsequently remember their lies as true. The central hypothesis is that, consistent with SMF (Johnson, 2006), the more motivated people are to misrepresent their own past attitude-relevant actions, the more they will misrepresent and subsequently misremember those actions.

Source Monitoring Framework (SMF) and Memory Errors

How do memory errors occur? SMF (Johnson, 2006; Johnson et al., 1993; Lindsay & Johnson, 2000) explains that memory errors occur during the process of attending to the sources of mental events. In attending to features of events in memory, people often refer to perceptual, semantic, emotional, or cognitive details to help them differentiate one event from another (Mitchell & Johnson, 2000). In monitoring the source of mental experiences, people sometimes confuse event details with each other or attribute them to other mental experiences (Johnson, 2006; Johnson, Foley, & Leach, 1988; Johnson & Raye, 1981).

When a wife asks her husband if he locked the front door prior to going to bed, for example, he might imagine this event. The mere process of imagining this event, however, may lead him to believe he actually perceived himself locking the door, when in fact it was only an imagination (e.g., Henkel, Franklin, & Johnson, 2000). Compared to imagined events, memories for real events are more likely to include perceptual and contextual details (e.g., the door handle's texture or time of day; Johnson, Foley, Suengas, & Raye, 1988). Including these types of details in an imagined event, therefore, may create difficulty in distinguishing perceived from imagined events.

People can unintentionally self-induce memory errors by introducing false information into their memories. Lying is one way people imagine fictitious events that deviate from reality. Although people often tell "outright" lies that have no basis in reality,

people also lie by exaggerating, evading, or omitting details (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996), suggesting that some lies contain bits and pieces of actual perceptions. A main prediction of SMF is that the more imaginations are similar to perceptions, the more likely people will confuse imaginations with perceptions (Henkel et al., 2000; Johnson, 2006). People who lie about past events using details similar to actual events, therefore, should have more difficulty distinguishing the lie from the truth. Going back to the earlier example of locking the door, the husband may lie to his wife and state that he locked the door when he only intended to do so at a later time. In the process of lying, he may imagine himself locking the door and then later confuse his imagination with a false memory of an actual perception.

In testing whether lying leads to memory errors, Pickel (2004) asked participants to watch a videotaped robbery. Some of these "witnesses" were interviewed about what they saw, and other witnesses were not interviewed and thus had no opportunity to rehearse the event details. For those being interviewed, some witnesses were instructed to lie about the robber's appearance, lie about someone else's appearance, or remain truthful. A week later, witnesses were asked to accurately remember the robber's appearance. Those who lied about the robber's appearance were subsequently less accurate in reporting details of the robber's appearance and other details of the crime than truthful and non-interviewed witnesses. Consistent with SMF, this effect occurred even when participants were instructed to be as accurate in their memory as possible. Thus, even when people are trying to be accurate, their memories can be distorted by lying about what actually happened.

Although this research was the first to examine the effect lying has on memory errors, it did not address the possibility that motivation may influence the extent of memory

confusion by influencing the way that people tailor their own perceptions about their past actions to others. In the study by Pickel (2004), for instance, participants were instructed by the experimenter to lie with no real motivation to do so other than experimental demand, and yet even unmotivated lying clouded subsequent memory. Would highly motivated lying produce even greater memory errors? It might, because people are much more likely to lie when they have something to gain from lying (DePaulo et al., 1996).

When motivated to lie, people are also more likely to lie about their own past actions, feelings, or thoughts than another person's (DePaulo et al., 1996). Lies told about oneself may be easier to tag as falsehoods in memory and thus easier to distinguish from actual details in source monitoring, but highly motivated liars may attempt to appear convincing and include perceptual and contextual details of their own actual perceptions (i.e., the characteristics of real mental events; Johnson, Foley, Suengas, et al., 1988). In their attempt to deceive others, highly motivated liars may be more, not less, likely to confuse lies about their own past actions with reality than less motivated liars. The present research addressed these questions by examining how indirectly manipulated motivation to lie affects memory for one's own past actions.

False Memories of Own Past Actions

In addition to inducing memory errors for simple mental events, researchers have also created false memories for complex autobiographical events involving people's own past actions. By taking advantage of known disruptors in the source monitoring process, researchers have experimentally induced memory errors for a variety of autobiographical information, including traumatic experiences (Hyman & Pentland, 1996; Loftus & Pickrell, 1995), food aversions (Bernstein, Laney, Morris, & Loftus, 2005), and impossible (Braun,

Ellis, & Loftus, 2002) or unusual events (Thomas & Loftus, 2002). Researchers have also induced memory confusion for evaluations of past events, such as loving asparagus the first time a person tried it (Laney, Morris, Bernstein, Wakefield, & Loftus, 2008) or believing that the childhood experience of having one's ear licked by Pluto was either pleasant or unpleasant (Berkowitz, Laney, Morris, Garry, & Loftus, 2008). Although they have not compared high vs. low motivation to lie, results of these experiments have supported the notion that, similar to other SMF studies, people can easily confuse their own past experiences by incorporating false information in the memory process.

Researchers have also induced false memories for one's own past attitude-relevant behaviors. Using SMF, researchers have shown how attitude-relevant actions that were only imagined are later remembered as having actually happened (Frye & Lord, 2009; Frye, Lord, & Brady, 2012; McIntyre, Lord, Lewis, & Frye, 2004). Based on these studies, imagining oneself take previously denied attitude-relevant actions can produce differences in the extent to which people falsely remember having actually performed those actions. For example, McIntyre and colleagues (2004) changed participants' attitudes toward gay men by having them write hypothetical scenarios in which they took either positive or negative actions toward gay men. The scenarios involved actions that the participants had previously denied taking toward gay men.

As predicted by SMF, participants falsely remembered having taken the actions toward gay men that they had previously imagined when writing the scenarios. These remembered actions were the same actions they had earlier denied. This effect only occurred when participants imagined themselves performing the actions in the scenarios and not when they imagined someone else performing the actions. If one's own actions embody greater

motivation than another person's actions, these studies suggest that motive to lie may play an important role in the relationship between false descriptions and false memories.

Although false memory research suggests people can confuse their own past actions in memory (e.g., Laney et al., 2008; McIntyre et al., 2004; Thomas & Loftus, 2002), these procedures involved experimenter instructions, rather than something people do on their own. Lying is one way people may introduce false information about their own past actions in memory. Even procedures from past research on lying and SMF (e.g., Pickel, 2004), however, used experimenter instructions to induce participants to lie. Motivation to lie is one way to induce participants to spontaneously lie without direct experimenter instructions.

Another problem with past research on SMF and false memories is checking the accuracy of memory reports. The procedures typically involve participants reading a scenario (Tversky & Marsh, 2000), watching a video (Pickel, 2004), or self-reports of past actions (Loftus & Pickrell, 1995; McIntyre et al., 2004) and checking them against recall accuracy. No study has looked at how various motivations to lie affect people's spontaneous lying behavior, especially for past attitude-relevant actions.

Motivation to Misrepresent Past Attitudes

Only two experiments have examined the effect of self-motivated lying about past attitudes on memory: research by Brady and Lord (in press). In their first experiment, Brady and Lord asked single college students to report their attitudes toward mandatory comprehensive exams in an initial survey taken at the beginning of the semester. All participants reported strong attitudes against mandatory comprehensive exams. Approximately 2 weeks later, participants arrived in the lab to participate in an "unrelated" study on initiating online dating relationships. They were shown their partner's "profile," and

led to believe that they would later meet an opposite-sex partner who strongly favored mandatory comprehensive exams. The experimenters manipulated the physical attractiveness of the partner, such that some believed they would meet an attractive opposite-sex partner, whereas others believed they would meet an unattractive partner.

In their own profile to be sent to their partner prior to meeting in person, participants had to tell their partner their attitude toward mandatory comprehensive exams. Then, after learning that the partner was entirely fictitious, participants were given a memory test and asked to recall their actual answers from the earlier survey taken at the beginning of the semester. Participants lied and subsequently misrecalled their original attitudes to a greater extent when expecting to meet an attractive than an unattractive partner. In a mediation analysis, the more participants lied, the more they misremembered how they originally felt toward mandatory comprehensive exams. The partner's level of physical attractiveness affected how much participants lied, and their level of lying in turn affected how much they remembered.

In their second experiment, Brady and Lord (in press) used the same general procedure but changed the dating cover story to one about working with a partner on various tasks. To manipulate motivation to lie, they again used attractive vs. unattractive opposite-sex partners. In order to manipulate the extent to which some people lied and others did not lie, participants learned their partner favored mandatory comprehensive exams either before or after telling their partner what they put on the earlier mandatory exam scale taken at the beginning of the semester. Thus, participants had or did not have foreknowledge of an attractive or unattractive partner's attitude at the time they made an attitude claim.

When asked to recall their past attitudes, participants with foreknowledge of an attractive partner's attitude claimed and subsequently remembered more positive attitudes than participants in the other three conditions. In a mediation analysis, the researchers again showed that the more participants lied about their past attitudes, the more they misrecalled what they originally put on the attitude scale. The authors interpreted these results using research from biased communication theories (e.g., Hirst & Echterhoff, 2012; Marsh, 2007), suggesting that activating common communication goals (e.g., wanting to impress someone) leads people to lie about and subsequently misremember their original responses. The higher the motive to impress, the greater the lie, and the greater the lie, the more likely the lie is to be confused with reality.

It is unclear from these results, however, whether other types of motivations to lie might produce similar effects, or if differences in lying are unique to differences in motivation that are caused by differences in physical attractiveness. Research from SMF, suggests that incorporating false information in imagination leads to memory confusion (Henkel et al., 2000; Johnson et al., 1993; Johnson & Raye, 1981), so a greater degree of false information, as occurs with greater motivation to lie, would produce greater memory confusion. Even motivations different from a partner's high vs. low level of physical attractiveness would be capable of producing different levels of lying, which would in turn produce different levels of memory confusion. Differences in how big a lie people tell are important, not what caused those differences.

The Present Experiments

Drawing upon research by Brady and Lord (in press) and SMF, the present experiments examined whether motivation to lie about past attitudes other than physical

attractiveness affect the extent to which liars misremember their own past attitudes. To test this possibility, the main hypothesis of the present research was that people who have high motivation to lie should misrepresent and misremember their past attitudes to a greater extent than people with low motivation to lie. In two experiments, motivation to lie was examined as a possible moderator in the relationship between lying and memory errors. Using the same mating paradigm employed by Brady & Lord, Experiment 1 addressed whether relationship status of the other person might affect the extent to which people misrepresent and misremembered their past attitudes. Because Brady & Lord found that people were highly motivated to lie to single, attractive opposite-sex targets, attractiveness of the target was kept constant at a high level. People expecting to meet a single, attractive partner were predicted to lie about and misremember their past attitudes to a greater extent than people expecting to meet an attractive partner who was already in a committed romantic relationship. To ensure that motivated lying was produced by memory errors and not by attitude change (e.g., Lydon, Zanna, & Ross, 1988; Ross, McFarland, & Fletcher, 1981), participants were also asked about their own current attitudes. Current attitudes were predicted to be unaffected by the level of lying and subsequent memory errors.

Because lying does not always occur in the context of mating relationships, Experiment 2 addressed whether reward potential (in a non-mating setting) might also create differences in motivation to lie, differences in the extent of the lie, and differences in misremembering past attitudes. Experiment 2 used a mediation analysis to examine whether the extent to which people lie about their past attitudes influences the extent to which reward seeking affects memory. Using same-sex targets of average attractiveness, it was predicted that people expecting to meet a partner with the power to reward them would misrepresent

and misremember their past attitudes to a greater extent than people without such expectations. The more people lied about their past attitudes, moreover, the more they would misremember their past attitudes. The overall prediction from both experiments was that high motivation to lie—whether induced by a potential relationship with a single vs. unavailable opposite-sex other or by a same-sex partner who could vs. could not reward them—would lead people to lie more about their past attitudes and subsequently misremember more of their own past attitudes.

Experiment 1

Experiment 1 examined whether relationship status of the other person influences the extent to which people lie about and misremember their past attitudes. Using Brady and Lord's (in press) basic procedure, single participants expressed disagreement with mandatory comprehensive exams on an initial survey taken at the beginning of the semester. Approximately 6 weeks later, they thought they were about to meet a highly physically attractive person of the opposite sex who was very positive toward instituting mandatory comprehensive exams. To induce high vs. low motivation to lie, some participants believed the other person was single and others were led to believe that the other person was already in a committed romantic relationship. This manipulation was used to vary motivation for lying, because people lying to a single target may be likely to tailor their past attitudes in order to initiate a romantic relationship with the person beyond the end of the experiment. People lying to a committed target may lie to some degree merely for the purposes of impression management (e.g., Lynn & Simons, 2000), but they would presumably have lower overall motivation to lie, and would lie less, than would people lying to a romantically available target. As a result, it was predicted that people who lied to a single, very attractive

opposite-sex partner would lie to a greater extent than would those who lied to an equally attractive partner who was already in a committed relationship.

To control for effects of simply knowing a very attractive partner's attitudes but making no false claims about their past attitudes, some participants had to tell the other person what they had reported as their attitude toward mandatory comprehensive exams on the initial survey, whereas others were given no opportunity to make such an attitude claim. This control was included because previous research has shown that people often conform their attitudes toward the attitudes of attractive targets (Messner, Reinhard, & Sporer, 2008; Mills & Aronson, 1965). People who know an attractive target's attitude may spontaneously change their attitudes to those held by an attractive target and subsequently bias their attitude recall because of the persuasiveness of the target's attractiveness.

If simply knowing an attractive target's attitude does not lead to memory distortion, the effect lying has on memory could not be due to biased recall related to attitude change. Consistent with SMF, it was predicted that making an exaggerated attitude claim would lead to subsequent memory errors, and that the act of making the claim was in itself more important than simply being persuaded by learning that an attractive person held a view different from one's own.

After either making an attitude claim or not, all participants were told the other person was fictitious and they would not be meeting anyone. This debunking was inserted to remove any further motivation to misrepresent. Participants were then asked to remember how they answered the initial survey and to report their current attitudes toward mandatory comprehensive exams. The two independent variables were relationship status of the partner

and whether or not participants claimed attitudes to the partner. The main dependent measure was their recalled attitudes toward mandatory comprehensive exams.

Method

Participants. One-hundred sixteen single students participated, one at a time, for course credit (48 men; 68 women). Only participants who were single at the beginning of the semester were eligible to participate. Three students were excluded from the analyses because they misunderstood the partner information, yielding 113 total participants (46 men; 67 women).[1]

Materials and procedure. The procedure had eight parts: initial attitude survey, partner status manipulation, manipulation check, claimed past attitudes, discomfort measure, filler task, memory test, and current attitudes questionnaire.

Initial attitudes. As part of a large online survey at the beginning of the semester, participants indicated their agreement with several proposed campus changes, including instituting mandatory comprehensive exams for all graduating seniors starting in the current year (-5 = *very much against*; 0 = *neither for nor against*; +5 = *very much in favor*; see Appendix A). Participants selected to participate indicated they did not agree with instituting mandatory comprehensive exams (responding at most -3 on the scale). Participants' initial attitudes (M = -4.44, SD = 0.77) did not differ across conditions, $F(1, 109) = 1.49$, *ns*.

Partner status manipulation. In an ostensibly unrelated study approximately 6 weeks later, participants were told that the researchers were investigating online vs. face-to-face communication, and that they would meet another student first online and then in-person during the second part of the session. As part of the online interaction, participants used an online instant message program to interact with their partner, who was actually a confederate

[1]Participant sex had no effect on the reported results, ps < .11.

in another lab room typing scripted responses. The partner's photo was of an opposite-sex person who was pre-tested as high in physical attractiveness (see Appendix B).[2] During their online interaction, participants in the *committed partner* condition (n = 55) learned that their partner had a long-term romantic partner, whereas participants in the *single partner* condition (n = 58) learned that their partner was single.

After participants introduced themselves to their partner, participants were told that they would be discussing one of several proposals from the earlier online questionnaire they took at the beginning of the semester. As part of the online interaction, participants learned that their partner strongly favored mandatory comprehensive exams when the partner typed, "Mandatory exams? I really think they're a good idea." Participants learned only that their partner favored mandatory exams and were deliberately given no persuasive arguments or opportunities to respond to the partner during the online chat portion (see Appendix C).

Manipulation check. After learning that their partner favored mandatory exams, participants were asked to what extent they would like to "please," "impress," "get along with," and "see yourself hanging out" with their partner on scales from 1 (*not at all*) to 9 (*very much*). These four items were averaged to form a composite score of motivation to impress the partner (α = .80). As a check for attention to the partner's attitude, participants also indicated how they thought their partner felt toward mandatory comprehensive exams. Three students (2.5% of total sample) were excluded from the analyses for reporting that their partner opposed mandatory exams.

[2]To ensure effects were not due to the photo of a specific person, participants were randomly assigned to see one of three same-sex photos that were pre-tested by 23 students from the same university (17 women; 6 men) on 9-point scales (1 = *extremely unattractive*; 5 = *average attractiveness*; 9 = *extremely attractive*). The three male photos (Ms = 6.44, 6.38, 6.37) did not differ from each other, $F < 1$, and the three female photos (Ms = 6.67, 6.50, 6.50) did not differ from each other, $F < 1$.

Claimed past attitudes. Participants were also randomly assigned to be in one of two attitude claim conditions. In the *claimed past attitude* condition (*n* = 59), they were asked to complete a brief questionnaire about mandatory exams to ostensibly facilitate their face-to-face discussion. The experimenter told participants that they would exchange their questionnaire with their partner and that their partner would see their responses when they met in person. On the questionnaire, participants were asked to tell their partner how they had marked the scale about mandatory comprehensive exams on the earlier online survey at the beginning of the semester from -5 (*very much against*) to +5 (*very much in favor*) and to explain their reasoning for why they put that number on the scale (see Appendix D).

Telling the partner how they filled out the initial questionnaire and explaining their reasoning was the participants' opportunity to misrepresent their past attitudes to their partner. In the *no claimed past attitude* condition (*n* = 54), participants did not have an opportunity to claim a past attitude to their partner. Instead, these participants went directly from the partner manipulation check questions to the next part of the experiment. To summarize the four conditions: participants claimed a past attitude to a single partner (*n* = 30); claimed a past attitude to a committed partner (*n* = 29); did not claim a past attitude to a single partner (*n* = 28); or did not claim a past attitude to a committed partner (*n* = 26).

Discomfort measure. Immediately after either claiming or not claiming a past attitude, they completed an affect measure to assess to the extent to which they felt discomfort, a proxy measure that has been used to assess cognitive dissonance (Elliot & Devine, 1994). Embedded among several positive and negative terms, three terms, *uncomfortable, uneasy,* and *bothered*, were averaged to create a discomfort score ($\alpha = .70$). Participants indicated how they were feeling "right now" on a 7-point scale (1 = *does not*

apply at all; 7 = *applies very much*). This measure of cognitive dissonance was included to rule out a possible alternative mechanism in which participants changed their attitudes and their memories because they felt more dissonance from lying than not lying to someone. If cognitive dissonance were involved, it should affect attitudes but not memory. Attitude change could occur without discomfort, however, through self-perception processes (Bem, 1972). Using the composite score for discomfort, participants reported similar levels of discomfort across the four conditions (Ms = $3.18_{\text{claim-single}}$, $2.77_{\text{claim-committed}}$, $2.98_{\text{no claim-single}}$, $2.65_{\text{no claim-committed}}$), $F < 1$.

Filler task. Participants were then given 10 min to work on Sudoku puzzles to allow enough time between claiming their attitudes to their partner and the subsequent memory test (see Johnson, 2006).

Memory test. After the filler task, participants were told that the previous cover story was fictitious and that the photo of their partner was of an unknown person who did not attend their university and whose opinions on mandatory exams were unknown. Participants were also told that the responses from their partner were fictitious and scripted by a confederate, and that they would not be meeting anyone for the remainder of the experiment.

Participants were then told that the true purpose of the study was about memory and that they would be completing a memory test consisting of 10 items from the earlier online study completed at the beginning of the semester. One of the items was instituting mandatory comprehensive exams for graduating seniors (see Appendix E). To increase motivation to answer accurately, the experimenter provided the participants with an incentive, such that anyone who answered all 10 items correctly would receive double experimental credit for participating.

After participants completed the memory test, they were asked how accurate and confident they thought they were on the memory test on 7-point scales (1 = *not at all*; 7 = *very*). Participants were also asked how many of the 10 questions they believed they correctly answered (i.e., marked the same answer on the initial survey). Across the four conditions, participants' perceived accuracy (M = 2.89, SD = 1.15), $F < 1$, confidence (M = 2.65, SD = 1.18), $F(1, 109) = 1.17$, *ns*, and how many they thought they got correct (M = 4.04, SD = 1.57), $F < 1$, did not differ. Condition had no effect on number participants actually got correct (M = 3.19, SD = 1.74), Fs < 1. Although no participant got all 10 right (with 11 alternatives per question), 14 participants got 6 or more correct.

Current attitudes. To assess the extent to which memory errors may have affected subsequent attitude change, participants were then asked to complete a current attitude questionnaire over the same 10 items used in the memory test. The experimenter stressed to participants to complete the items according to their current attitudes, not their former attitudes. Participants indicated their current attitudes from -5 (*very much against*) through 0 (*neither for nor against*) to +5 (*very much in favor*), and also how likely they were to vote for mandatory exams from -5 (*very likely to vote against*) through 0 (*unsure*) to +5 (*very likely to vote in favor*). These two questions were averaged to create a composite measure of current attitudes (α = .85). After participants completed the current attitudes questionnaire, they were asked to guess the hypothesis, debriefed, thanked, and dismissed. No participant correctly guessed the hypothesis.

Results and Discussion

Manipulation check. Partner's relationship status successfully manipulated the extent to which participants were motivated to impress their partner. Using the composite

motivation score, students with single partners reported stronger motivation to make a positive impression on their partners (M = 6.53, SD = 1.17) than did students with partners who were already in a committed relationship (M = 5.58, SD = 1.29), $F(1, 112) = 16.85$, $p < .001$, $\eta^2 = .13$.

Claimed past attitudes. The prediction was that lying to single vs. committed partners would give participants a high vs. low motivation to lie about past attitudes. This motivation to lie would prompt people to lie to a greater extent to the single partner than to the committed partner. This hypothesis, however, was not supported. Participants in the claimed past attitude conditions did not differ in what they told their partner about their past attitudes, regardless of whether the partner was said to be single (M = 1.13, SD = 2.89) or in a committed relationship (M = 0.48, SDs = 2.69), $F < 1$. If memory errors stem from magnitude of misrepresentation regardless of reasons for the misrepresentation, there would be no difference in recalled attitudes.

Memory test. Because recalled attitudes were positively skewed, a 2 (Partner Relationship Status: single vs. committed) × 2 (Attitude Claim: yes vs. no) between-subjects ANOVA on recalled attitudes was performed on square roots (see Box & Cox, 1964). This analysis yielded only a significant main effect for claimed past attitude, $F(1, 109) = 3.79$, $p = .05$, $\eta^2_p = .03$ (see Figure 1). Participants who claimed an attitude to their partner recalled having had more positive attitudes toward mandatory comprehensive exams (M = -1.36, SD = 2.60) than did those who made no attitude claims to their partner (M = -2.20, SD = 2.28). This main effect did not interact with partner relationship status, $F < 1$. Misrepresentation by itself was sufficient to produce greater memory errors. Once participants claimed relatively positive past attitudes, they also made memory errors, and the partner's relationship status

made no difference. Although the motivation to lie did not manipulate the extent to which participants lied, simply making an exaggerated attitude claim led participants to remember more positive attitudes toward mandatory comprehensive exams than those who made no attitude claims. These findings suggest that lying to single vs. committed attractive targets does not affect memory errors. This motivation, however, is still in the context of mating motivations. How might motivation to lie apart from mating motives affect the extent to which liars misremember their own past attitudes?

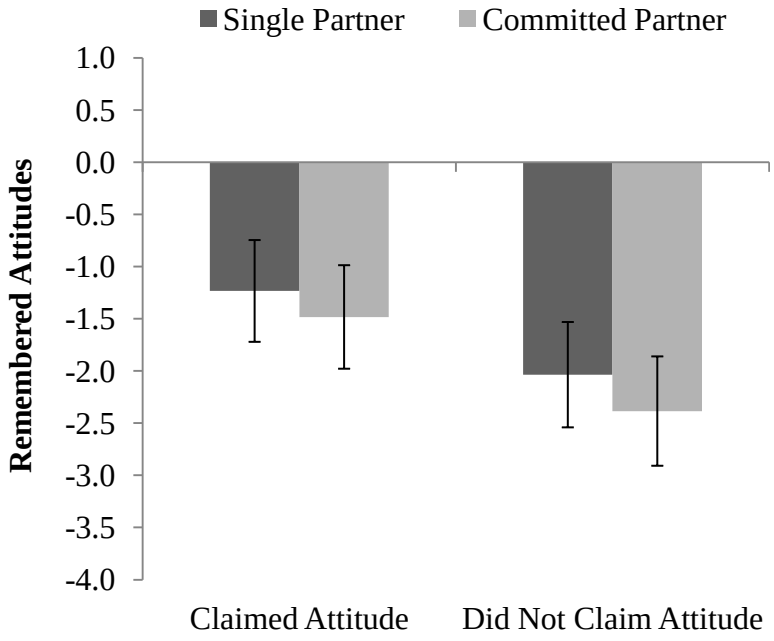


Figure 1. Mean remembered attitudes on initial survey regarding mandatory comprehensive exams. Standard errors are represented as error bars attached to each column (Experiment 1).

Current attitudes. Participants' reported current attitudes were subjected to a 2 (Partner's Relationship Status) × 2 (Attitude Claim) between-subjects ANOVA, which yielded a significant interaction, $F(1, 109) = 4.50$, $p = .04$, $\eta^2_p = .04$. Among students who claimed attitudes to their partner, participants who expected to interact with a single partner

(M = -0.78, SD = 3.02) reported more favorable current attitudes than did those who expected to interact with a committed partner (M = -2.19, SD = 2.63), simple effects $F(1, 109) = 4.07$, $p < .05$, $d = .50$. Among students who made no attitude claims to their partner, there was no difference between those expecting to meet a single (M = -2.96, SD = 2.47) vs. committed partner (M = -2.23, SD = 2.51), simple effects $F(1, 109) = 1.01$, *ns*. Although the manipulation of partner status had no effect on claimed or remembered attitudes, it could not be said to have been entirely ineffective, because it significantly affected current attitudes.

Experiment 2

Past research suggests that people often lie in order to gain a reward from someone else (see DePaulo et al., 1996). In one study (DePaulo, Ansfield, Kirkendol, & Boden, 2004), researchers asked participants, for example, to report the most serious lie they have ever told or been told. Lies told to attain material rewards or advantages accounted for almost a third of all lies reported by participants, suggesting that reward potential is a strong motivator for lying. Experiment 2 tested whether differences in reward potential (a different motive for lying than wanting to impress a very attractive partner or one who was romantically available) would produce differences in the magnitude of lies told and corresponding differences in the magnitude of memory errors.

Participants in Experiment 2 were given the same information as in Experiment 1 about how their partner favored mandatory comprehensive exams. Unlike Experiment 1, the partners were of the same sex as the participant and were of average attractiveness. To induce different levels of lying through motivation, some participants were led to believe that their partner had the potential to reward them following their interaction, whereas others were not told anything about rewards. If reward potential provides a high motivation to lie,

participants should lie to a greater extent to a partner with the potential to reward than to a partner with no reward potential. If motivated lying about past attitudes leads to memory confusion (Brady & Lord, in press), participants who lie to a partner with a potential reward should also misrecall their original attitudes to a greater extent than those who lie to a partner with no reward potential.

Method

Participants. Seventy-one students participated one at a time for course credit. Five students were excluded from the analyses because they misunderstood the partner information, yielding 66 total participants (27 men; 39 women).[3]

Materials and procedure. The procedure had nine parts: initial survey, reward manipulation, partner interaction, manipulation check, claimed past attitudes, discomfort measure, filler task, memory test, and current attitudes.

***Initial survey*.** In a different semester from Experiment 1, participants were selected to participate if they were strongly against instituting mandatory comprehensive exams (responding at most -3) on -5 (*very much against*) through 0 (*neither for nor against*) to +5 (*very much in favor*; see Appendix A). Participants did not differ on initial attitudes (M = -4.26; SD = 0.87) across conditions, $F < 1$.

***Reward manipulation*.** Upon arriving to the lab approximately 6 weeks later, participants were given the same cover story concerning online vs. face-to-face communication as in Experiment 1. To manipulate motivation to lie about past attitudes, participants in the *potential reward* condition (n = 32) were told that the researchers wanted to improve show-up rates to experiments by providing opportunities for additional rewards. They were told that after their interaction their partner could decide to give the participant

[3] Participant sex had no effect on the reported results, $F < 1$.

double credit for the experiment or not. Participants in this condition were explicitly told that their partner could make this decision for any reason and that their partner would gain nothing from making this decision. Participants in the *control* condition (n = 34) were not told anything about receiving double credit from their partner (i.e., rewards were never mentioned).

Partner interaction. The same online instant message program and confederate script used in Experiment 1 were used to introduce participants to their partner. Unlike in Experiment 1, however, the partner's photo was of a person of the same sex who was pre-tested as average in physical attractiveness (see Appendix B)[4]. As in Experiment 1, participants learned during their online conversation that their partner strongly favored mandatory comprehensive exams.

Manipulation check. The same four items used in Experiment 1 measured a composite motivation to impress partner (α = .80). As in Experiment 1, participants indicated how they thought their partner felt toward mandatory comprehensive exams as a check for attention to partner's attitude. Five students (7% of total sample) were excluded from the analyses for reporting that their partner opposed mandatory exams.

Claimed past attitudes. After participants answered the partner questions, all participants completed the same claimed attitudes questionnaire used in Experiment 1, whereby participants had the opportunity to claim a past attitude to their partner.

Discomfort measure. As in Experiment 1, the same three items were used to create a discomfort score (α = .72). As in Experiment 1, there were no differences across the two

[4]In the same pre-test conducted in Experiment 1, students rated the attractiveness of photos on 9-point scales (1 = *extremely unattractive*; 5 = *average attractiveness*; 9 = *extremely attractive*). The three male photos (*M*s = 5.06, 4.71, 5.00) did not differ from each other, $F < 1$, and the three female photos (*M*s = 4.00, 4.83, 4.17) did not differ from each other, $F < 1$.

conditions in participants' self-reported discomfort (Ms = $1.99_{\text{potential reward}}$, 2.38_{control}), $F(1, 64) = 2.31$, $p = .13$, suggesting that cognitive dissonance was not aroused by these procedures.

***Filler task*.** Participants then completed the same 10-min filler task (Sudoku puzzles) used in Experiment 1.

Memory test. As in Experiment 1, participants were told immediately after the filler task that the previous cover story, including their partner and their partner's responses, were fictitious and that they would not be meeting anyone for the remainder of the experiment. They were told that the true purpose of the study was memory and they were given the same 10 item memory test used in Experiment 1, which included the mandatory comprehensive exam item. Participants were told they would receive double credit for answering all items accurately. They were also asked the same accuracy follow-up questions used in Experiment 1. Perceived accuracy ($M = 3.20$; $SD = 1.35$), confidence ($M = 2.67$; $SD = 1.23$), and how many they thought they got correct ($M = 4.32$; $SD = 1.91$) did not differ across the two conditions (Fs < 1). Condition had no effect on number participants actually got correct ($M = 3.47$, $SD = 1.79$, $F < 1$. Although no participant got all 10 exactly right (with 11 alternatives per question), 9 participants got 6 or more correct.

Current attitudes. Participants completed the same current attitudes questionnaire used in Experiment 1. The general attitude question and the question about intentions to vote in favor of mandatory comprehensive exams were averaged to create a composite measure of current attitudes ($\alpha = .92$). After participants completed the current attitudes questionnaire, they were asked to guess the hypothesis, debriefed, and thanked for their participation.

Results and Discussion

Manipulation check. Providing participants with a potential reward from their partner proved a reliable way to manipulate motivation to impress their partner. Using the composite motivation score, participants reported greater motivation to impress their partner in the potential reward condition (M = 6.66, SD = 1.43) than in the control condition (M = 5.95, SD = 1.37), $F(1, 64) = 4.41$, $p = .04$, $\eta^2 = .06$.

Claimed past attitudes. The prediction was that participants would lie to a greater extent when motivated by a potential reward than when not motivated by reward. Consistent with this hypothesis, participants in the potential reward condition were more likely to claim holding more positive initial attitudes (M = 1.38, SD = 2.45) than did participants in the control condition (M = -0.59, SD = 2.90), $F(1, 64) = 8.77$, $p < .01$, $\eta^2 = .12$. If memory errors stem from misrepresentation, this significant difference in claimed past attitudes would produce a significant difference in recalled past attitudes.

Memory test. As in Experiment 1, recalled attitudes (which could range from -5 to +5) were positively skewed, so a one-way analysis of variance was performed on square roots (see Experiment 1). This analysis revealed a significant effect of partner condition, $F(1, 64) = 4.51$, $p = .04$, $\eta^2 = .07$ (see Figure 2). Participants with a partner who might reward them remembered giving more positive initial survey attitudes (M = -0.38, SD = 3.27) than did participants with a partner without the potential to reward them (M = -1.77, SD = 2.64), d = 0.47. These results suggest that participants who were highly motivated to lie to their partner were more likely to lie about and misremember their own past attitudes than those who are not as motivated to lie.

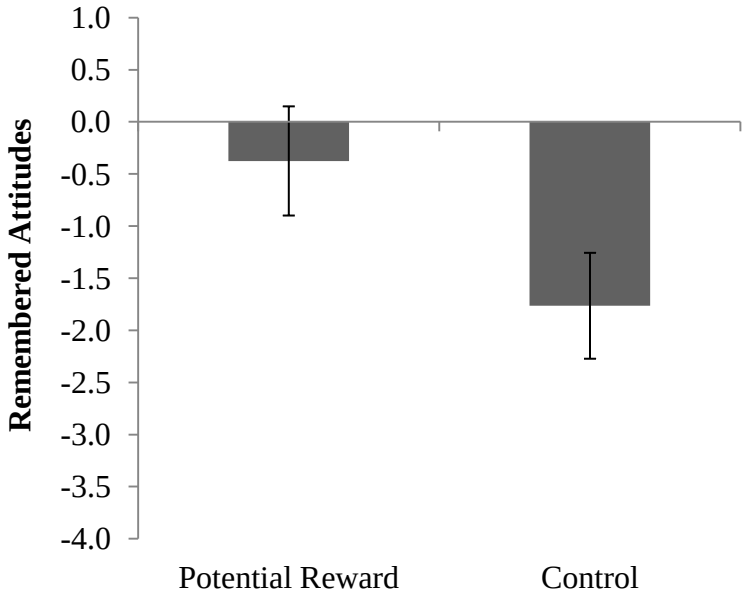


Figure 2. Mean remembered attitudes on initial survey regarding mandatory comprehensive exams. Standard errors are represented as error bars attached to each column (Experiment 2).

Mediation analysis. The main prediction was that the memory effects would occur because participants would be more likely to lie to a partner who could reward them than when rewards were not mentioned. In other words, the effects of potential reward would be mediated by the extent to which participants claimed positive attitudes toward mandatory comprehensive exams. Using the Preacher and Hayes (2008) bootstrapping procedure and corresponding SPSS macro to test for a significant indirect effect of partner condition on transformed recalled attitudes via claimed attitudes (bootstrap resamples = 1000), results revealed a significant indirect effect of partner condition on remembered attitudes via claimed attitudes, $\beta = -.22$ ($b = -.33$, $SE = 0.12$, confidence interval does not include 0, 95% CI [-.60, -.12]; see Figure 3).

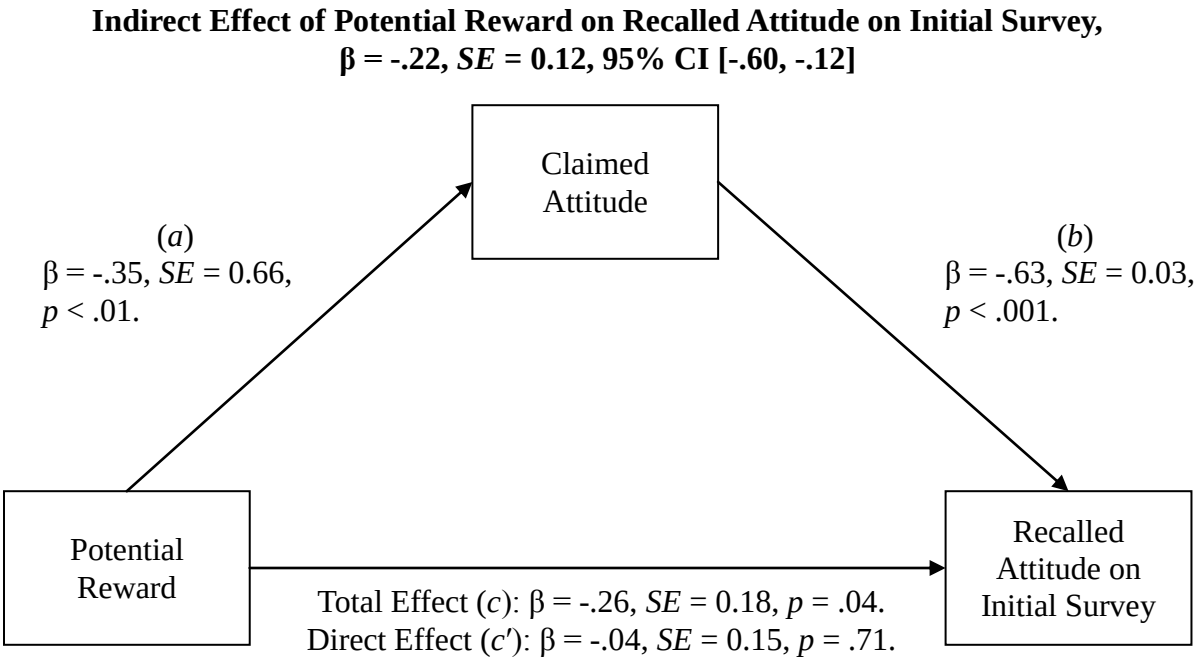


Figure 3. Mediation model for Experiment 2. All path coefficients represent standardized regression weights. The direct effect coefficient represents the effect of condition on recalled attitudes (transformed) after controlling for the mediating influence of claimed attitudes (95% CI [-.60, -.12]).

As predicted, partner condition significantly predicted participants' claimed attitudes (*a* path), β = -.35 (*b* = 1.96, *SE* = 0.66), *t*(65) = 2.96, *p* < .01, whereby participants in the potential reward condition claimed more positive attitudes to their partner than did participants in the control condition. Further, as participants claimed more positive attitudes, they recalled having had more positive attitudes toward mandatory comprehensive exams on the initial survey (*b* path), β = -.63 (*b* = -.17, *SE* = 0.03), *t*(65) = -6.17, *p* < .001. Although the indirect effect of partner condition on participants' remembered attitudes was significant (*c* path), β = -.26 (*b* = -.38, *SE* = 0.18), *t*(65) = -2.12, *p* = .04, the direct effect of potential reward on remembered attitudes after controlling for claimed attitudes was not significant (*c*′ path), β = -.04 (*b* = -.06, *SE* = 0.15), *t*(65) = -0.36, *p* = .71. Taken together, these findings

indicate that lying about previously held attitudes mediated the effect of partner condition on remembered attitudes.

Current attitudes. Current attitude scores were subjected to a one-way ANOVA, which produced no significant differences between those in the potential reward condition (M = -1.52, SD = 3.22) and those in the control condition (M = -2.51, SD = 2.63), $F(1, 64)$ = 1.91, *ns*. Although the manipulation for potential reward created differences in lying and memory, it had no effect on participants' reports of their current attitudes.

General Discussion

The present research examined whether motivation to lie moderated the extent to which liars fool themselves about their own past attitudes. The hypothesis was that high motivation to lie should lead to increased levels of lying and memory confusion. High vs. low motivation to lie was manipulated in two different ways. The manipulation of lying to single vs. committed partners in Experiment 1 did not support the central hypothesis. Rather, lying to single vs. committed partners produced similar levels of lying and memory distortion. Only when participants claimed a past attitude (and thus lied to their partner) did they misremember how they original felt toward mandatory comprehensive exams. The single vs. committed manipulation did, however, produce differences in participants' reported current attitudes.

Supporting the original hypothesis and consistent with Brady and Lord (in press), Experiment 2 found that people who wanted a reward from another person lied about and subsequently misremembered their past attitudes to a greater extent than those without reward expectations. As found by Brady and Lord, the more participants lied about their past attitudes, the more they misremembered how they originally felt toward mandatory exams.

Taken together, the results from the two experiments extend the findings of both SMF research and Brady and Lord by suggesting that motivation to lie affects memory processes when the motives for lying produce differences in the extent to which people lie.

Although the manipulation for lying used in Experiment 1 did not affect levels of lying, Experiment 1 still made an important contribution to the understanding of how liars fool themselves of their own past attitudes. Only for the participants who had the opportunity to lie to their partner did similar levels of lying produce similar levels of memory distortion. Given that participants who lied displayed stronger memory bias than those who had no opportunity to lie, Experiment 1 suggests that the same magnitude of lying told for different motivations to impress did not alter the extent of memory distortion. This finding is consistent with SMF research by demonstrating that simply incorporating false information into a person's memory impairs subsequent recall of the original information.

Also, unlike Brady and Lord's (in press) research, Experiment 1 adequately disentangled motives for lying from the levels of lying. Although lying to single vs. committed partners did not manipulate the levels of lying, the manipulation did manipulate different levels of motivation to impress, as evidenced by the extent to which participants wanted to make a positive impression on their partner and their subsequent reported current attitudes. Not only did participants report wanting to impress the single partner more than the committed partner, but claiming a more positive attitude to single partners led participants to change their current attitudes toward mandatory exams.

This finding alone suggests that the process by which liars fool themselves about their own past attitudes is a memory process and not a result of attitude change. If attitude change caused memory errors, any attitude change that occurred while participants lied to single

partners would have biased their memory of what they originally marked on the attitude scale (see Lydon et al., 1988; Ross, McFarland, Conway, & Zanna, 1984; Ross et al., 1981). Because there were no differences in attitude recall, this explanation for memory errors is unlikely (see also Frye et al., 2012). An SMF explanation better explains why memory errors only occurred for those who made false claims. Because participants with single partners were more likely to exaggerate their past attitudes, when trying to remember, they were more likely to incorporate this information into their mental experience of how they felt toward mandatory exams at the beginning of the semester. Simply making the false claim was enough to produce source confusions, whereby participants were unable to distinguish the lie from how they actually marked the attitude scale.

Experiment 2 also uniquely contributes to the research of motivated lying and memory by demonstrating that motivation to obtain a reward is a sufficient motivator to produce differences in lying and thus differences in memory errors. Consistent with Brady and Lord (in press), people who were highly motivated to lie were more likely to lie about their past attitudes and subsequently misremember how they originally felt toward mandatory exams. The extent to which people lied about their past attitudes, furthermore, mediated the extent to which people misrecalled their own past attitudes. These results were found in the absence of the mating context employed by Experiment 1 and Brady and Lord. Participants who expected to meet same-sex partners of average attractiveness were willing to lie for the purposes of seeking a reward. They lied more and made more memory errors when the partner could reward them than when rewards were not mentioned. These results suggest that qualitatively different types of motivation to impress the other person may only matter when the reasons for lying prompt differences in the extent to which people lie. Unlike Experiment

1, motivation to lie was confounded in Experiment 2 with levels of lying, but taken together, the results from both experiments suggest that the more people lie, the more likely they are to misremember their own past actions.

Implications for Source Monitoring and False Memories

The present research adds to SMF (Johnson, 2006) and research on false memories of past actions (Laney et al., 2008; McIntyre et al., 2004; Thomas & Loftus, 2002) by demonstrating that a lie about past attitudes can lead to memory errors when the motivation behind the lie affects levels of lying. Previous research demonstrated that lying leads to memory errors (Brady & Lord, in press; Pickel, 2004), but it did not directly test how other motivations to lie might affect memory confusion. The present research demonstrated, however, that memory errors occur when motivation to lie other than mating motives affects levels of lying.

Consistent with Brady and Lord's (in press) findings, differences in lying led to differences in memory errors. The present results suggest that the process of lying (as with making other false claims) disrupts people's ability to monitor the source of their actual past actions whether hypothetical or actual (Henkel et al., 2000; Johnson & Raye, 1981), which is exactly what SMF predicts. SMF also predicts that people who are not given an opportunity to selectively recall information or rehearse event details tend to have fewer inaccuracies than people who are given an opportunity to rehearse information to another person (Pickel, 2004; Tversky & Marsh, 2000). Consistent with this finding, participants in Experiment 1 who did not have an opportunity to lie did not display as much memory bias as those who did have an opportunity to lie. The overall finding from both experiments is that the more people tailor their responses toward the other person, the more they misremember what they actually

did in the past. What caused them to tell big vs. small lies is not as important as how much they lied.

As with previous research on lying and memory (Brady & Lord, in press), the present research has not tested a precise mechanism for these memory effects. Research on SMF finds that imagining performing an action leads to confusion of the imagination with an actual perception (Johnson, Foley, Suengas, et al., 1988). Based on the procedures of the present experiments, there is no way to know if participants imagined themselves marking a number on the positive end of an attitude scale while they were describing that action to their partner. Past research on imagining suggests that vividly imagining a false event can further facilitate memory confusion (Gonsalves et al., 2004; Johnson, Foley, Suengas, et al., 1988; Slusher & Anderson, 1987). Future research may be able to test this possibility by manipulating the extent to which participants are willing or able to vividly imagine themselves performing a false past action as they describe doing it.

Memory vs. Attitude Processes

The results of the present research also contribute to research on attitude change by demonstrating that differences in motivation to lie can create differences in current attitudes. Participants in Experiment 1 who lied to a single attractive partner later reported less negative current attitudes toward mandatory exams than did those who lied to a committed attractive partner. While making their false claims to the other person, participants with single partners may have more thoroughly restructured their mental representations of mandatory comprehensive exams (e.g., Lord & Lepper, 1999). They had greater motivation to impress the other person, presumably because of a stronger desire to establish a relationship beyond the end of the experiment, which may have led them to create more

positive associations with the attitude object. When they were later asked to report their current attitudes, participants who lied to either partner may have constructed their current attitudes based on existing associations they had toward mandatory comprehensive exams (Schwarz & Bohner, 2001), but those associations were more positive for participants who lied to a single than a committed partner. Although this "constructing attitudes" explanation would need further research with cognitive process measures, it seems at least possible that the reward manipulation in Experiment 2 produced no differences in current attitudes, because participants who lied to get a reward did not alter their mental representations while they were lying (Kelman, 1961).

The results of the present experiments also suggest that memory processes are separate from attitude change processes. Different reasons for lying are known to produce differences in attitude change (Hull & West, 1982; Jones & Davis, 1965; Kelly, 1973). In one study on anticipatory attitude change, for instance, people non-consciously shifted their attitudes toward the target audience when they expected to meet someone who held attitudes at odds with theirs. When the anticipated meeting with the audience could not take place, people reverted to their original attitudes on the issue (Cialdini, Levy, Herman, & Evenbeck, 1973). This research suggests that lying about attitudes does not lead to attitude change when the reason behind the lie has an obvious external cause. Participants who lied to the committed partner in Experiment 1 and those who lied to gain a reward in Experiment 2 fooled themselves about their own past attitudes without changing their current attitudes. The results of the present experiments thus suggest that different motivations for lying can affect how people use their memory of past evaluations when constructing a current attitude (Schwarz, 1998).

Self-Deception

In addition to increasing knowledge about memory and attitude change processes, the present research might add to our understanding of self-deception. Based on the present experiments, self-deception regarding one's own past attitudes can occur through two processes: memory and attitude change. This dual process notion is consistent with the idea that liars self-deceive to avoid costly social consequences of being caught in a lie (Trivers, 2000; von Hippel & Trivers, 2011). If inaccurate information about the lie is retained in conscious awareness (e.g., Coates, Butler, & Berry, 2006; Kolers, 1976; Lee, 2002; Seamon et al., 1995), the liars can maintain that they actually believed the falsehood they told. The present experiments suggest that through memory processes, liars can still maintain innocence so long as they falsely remember the inaccurate information. When liars have a strong motivation to lie, they may also be motivated to selectively forget information that is made salient (e.g., Coman, Manier, & Hirst, 2009; Cuc, Koppel, & Hirst, 2007). Consistent with the present experiments, liars might non-consciously adjust their attitudes more toward their falsehood than toward their actual past behavior when motivated by future possibilities with the other person—another way in which memory and attitude processes differ.

Because participants in the present experiments reported no differences in psychological discomfort associated with cognitive dissonance, the results cannot be explained by cognitive dissonance (Festinger, 1957) or the consistency principle (Abelson, 1968), which raises the question of what occurs physiologically during the self-deception process. Past research on self-deception suggests, for example, that people's explicit responses do not correspond with implicit measures of arousal (Gur & Sackeim, 1979; Sackeim & Gur, 1979). Participants in the present experiments may have been

physiologically aroused when lying to another person, but because of their self-deception, they reported no explicit differences in discomfort. Future research might include actual rather than self-reported physiological measures to see if liars who fool themselves are more or less physiologically aroused than those who do not fool themselves.

Conclusion

The present research suggests that high motivation that prompts high levels of lying is likely to lead to memory confusion. As predicted by SMF (Johnson, 2006), the more people misrepresent their past evaluative behavior, moreover, the more likely they are to fool themselves about what they actually did. Consistent with previous research (Brady & Lord, in press), these results suggest motivation plays an important role in the extent to which liars fool themselves, but only in creating lies of lesser or greater magnitude. Once the false claims are made, memory confusions are commensurate with those false claims. For the consequences of misrepresenting attitudes for memory, therefore, motivation for lying can affect the extent to which liars fool themselves about their own past actions.

APPENDIX

Appendix A

Baseline Attitude Measures

The following proposals may affect the student body at TCU. Please choose the number that corresponds with your attitude toward the proposal.

1. What is your attitude toward decreasing books and journals at TCU's library while increasing online holdings?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against decreasing books and journals					*neither for nor against decreasing books and journals*					*very much in favor of decreasing books and journals*	Decline

2. What is your attitude toward academic advising through TCU's Academic Services instead of advising through faculty members in students' major department?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against academic advising through Academic Services					*neither for nor against academic advising through Academic Services*					*very much in favor of academic advising through Academic Services*	Decline

3. What is your attitude toward instituting mandatory comprehensive exams for all graduating seniors at TCU starting this year?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against mandatory exams					*neither for nor against mandatory exams*					*very much in favor of mandatory exams*	Decline

4. Please indicate your attitude toward selling the Plan B day-after pill over the counter?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative					*neither positive or negative*				*very positive*		Decline

5. What is your attitude toward ending scheduling the TCU-SMU football game?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against ending the TCU-SMU football game					*neither for nor against ending the TCU-SMU football game*				*very much in favor of ending the TCU-SMU football game*		Decline

6. Please indicate your attitude toward the individual mandate part of Obama's health care reform bill (fines for not buying health insurance)?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative					*neither positive or negative*				*very positive*		Decline

7. What is your attitude toward raising tuition at TCU?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against raising tuition					*neither for nor against raising tuition*				*very much in favor of raising tuition*		Decline

8. Please indicate your attitude toward erecting a 12-foot fence across the entire Southern border of the United States?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative					*neither positive or negative*				*very positive*		Decline

9. What is your attitude toward allowing parental access to student health records?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against allowing parental access					*neither for nor against allowing parental access*				*very much in favor of allowing parental access*		Decline

10. Please indicate your attitude toward raising the federal debt ceiling (the statutory limit on the amount of US federal debt held by the government).

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative					*neither positive or negative*				*very positive*		Decline

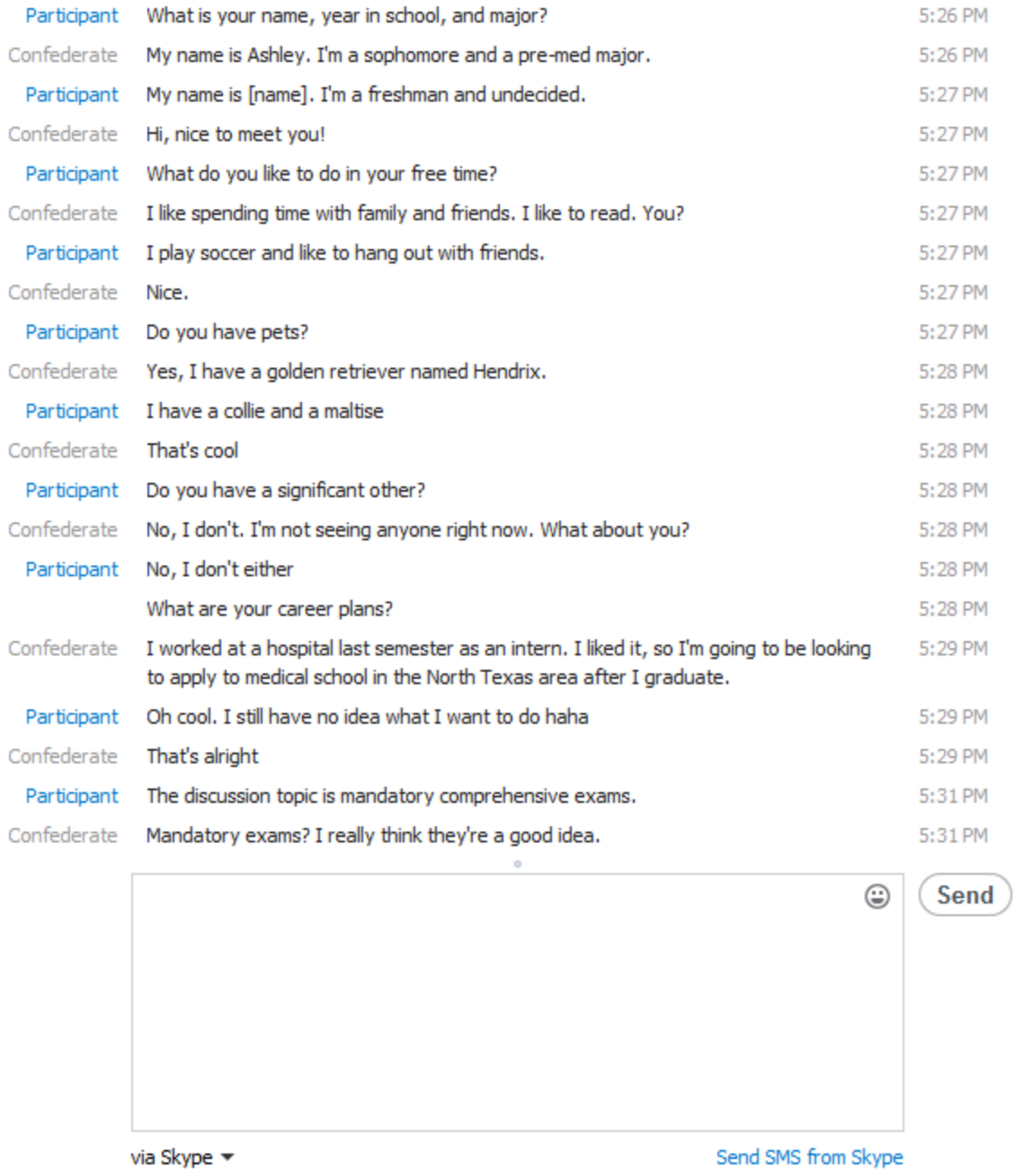
Appendix B

Partner Photos for Experiment 1

Partner Photos for Experiment 2

Appendix C

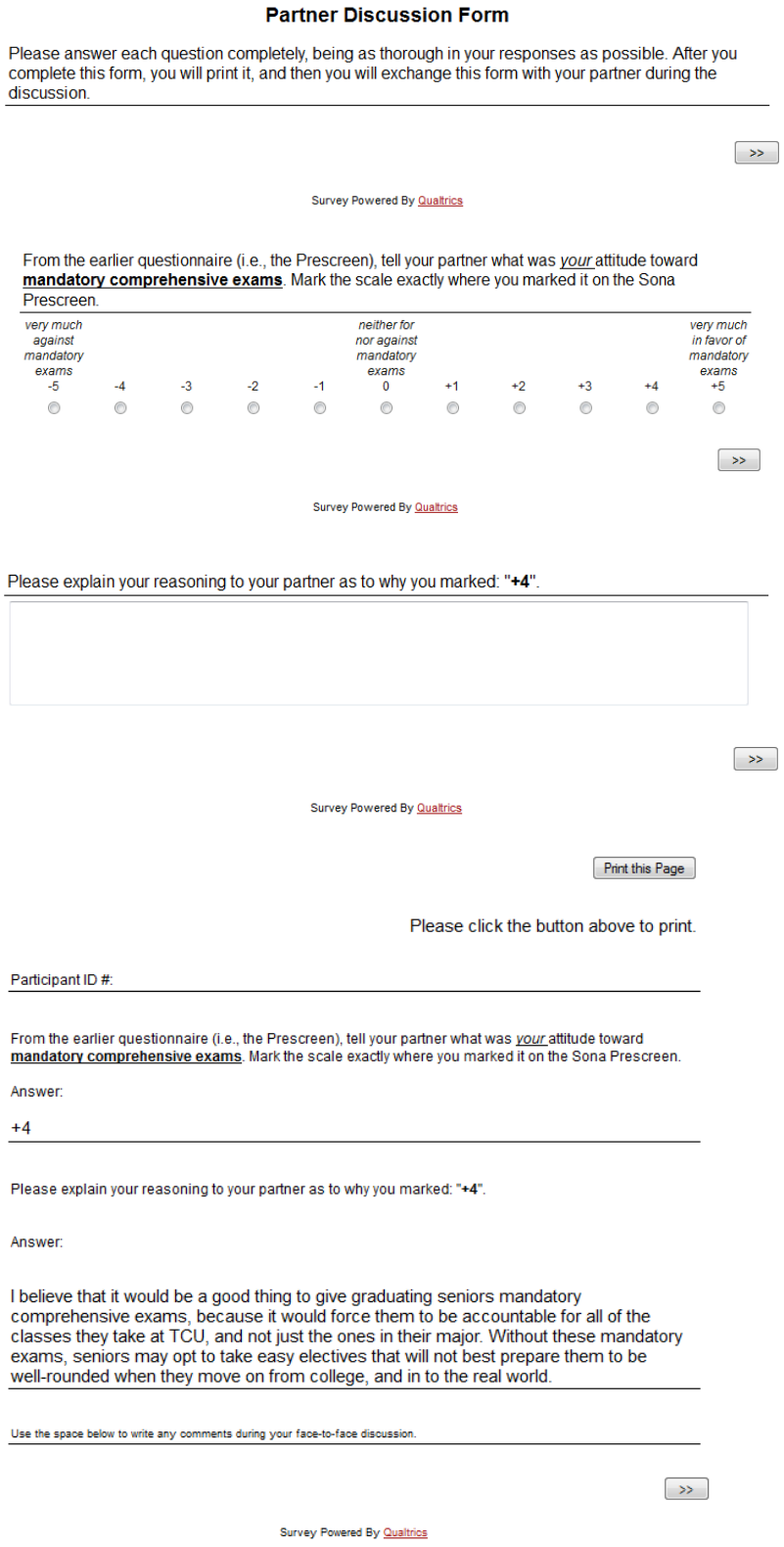
Confederate Script



Participant	What is your name, year in school, and major?	5:26 PM
Confederate	My name is Ashley. I'm a sophomore and a pre-med major.	5:26 PM
Participant	My name is [name]. I'm a freshman and undecided.	5:27 PM
Confederate	Hi, nice to meet you!	5:27 PM
Participant	What do you like to do in your free time?	5:27 PM
Confederate	I like spending time with family and friends. I like to read. You?	5:27 PM
Participant	I play soccer and like to hang out with friends.	5:27 PM
Confederate	Nice.	5:27 PM
Participant	Do you have pets?	5:27 PM
Confederate	Yes, I have a golden retriever named Hendrix.	5:28 PM
Participant	I have a collie and a maltise	5:28 PM
Confederate	That's cool	5:28 PM
Participant	Do you have a significant other?	5:28 PM
Confederate	No, I don't. I'm not seeing anyone right now. What about you?	5:28 PM
Participant	No, I don't either	5:28 PM
	What are your career plans?	5:28 PM
Confederate	I worked at a hospital last semester as an intern. I liked it, so I'm going to be looking to apply to medical school in the North Texas area after I graduate.	5:29 PM
Participant	Oh cool. I still have no idea what I want to do haha	5:29 PM
Confederate	That's alright	5:29 PM
Participant	The discussion topic is mandatory comprehensive exams.	5:31 PM
Confederate	Mandatory exams? I really think they're a good idea.	5:31 PM

Appendix D

Claimed Attitudes



Partner Discussion Form

Please answer each question completely, being as thorough in your responses as possible. After you complete this form, you will print it, and then you will exchange this form with your partner during the discussion.

>>

Survey Powered By Qualtrics

From the earlier questionnaire (i.e., the Prescreen), tell your partner what was *your* attitude toward **mandatory comprehensive exams**. Mark the scale exactly where you marked it on the Sona Prescreen.

very much against mandatory exams					*neither for nor against mandatory exams*					*very much in favor of mandatory exams*
-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5

>>

Survey Powered By Qualtrics

Please explain your reasoning to your partner as to why you marked: "**+4**".

>>

Survey Powered By Qualtrics

Print this Page

Please click the button above to print.

Participant ID #:

From the earlier questionnaire (i.e., the Prescreen), tell your partner what was *your* attitude toward **mandatory comprehensive exams**. Mark the scale exactly where you marked it on the Sona Prescreen.

Answer:

+4

Please explain your reasoning to your partner as to why you marked: "**+4**".

Answer:

I believe that it would be a good thing to give graduating seniors mandatory comprehensive exams, because it would force them to be accountable for all of the classes they take at TCU, and not just the ones in their major. Without these mandatory exams, seniors may opt to take easy electives that will not best prepare them to be well-rounded when they move on from college, and in to the real world.

Use the space below to write any comments during your face-to-face discussion.

>>

Survey Powered By Qualtrics

Appendix E

Memory Test

Directions: Please rate your agreement with the following items **the way that you answered them when you took the Prescreen on Sona Systems**. We are not interested in how you would rate these items now, but how you rated these items when you took the Prescreen. This is a memory test. Remember to be as accurate as possible in your answers.

1. What is your attitude toward decreasing books and journals at TCU's library while increasing online holdings?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against decreasing books and journals				*neither for nor against decreasing books and journals*					*very much in favor of decreasing books and journals*		Decline

2. What is your attitude toward academic advising through TCU's Academic Services instead of advising through faculty members in students' major department?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against academic advising through Academic Services				*neither for nor against academic advising through Academic Services*					*very much in favor of academic advising through Academic Services*		Decline

3. What is your attitude toward instituting mandatory comprehensive exams for all graduating seniors at TCU starting this year?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against mandatory exams				*neither for nor against mandatory exams*					*very much in favor of mandatory exams*		Decline

4. Please indicate your attitude toward selling the Plan B day-after pill over the counter?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative				*neither positive or negative*					*very positive*		Decline

5. What is your attitude toward ending scheduling the TCU-SMU football game?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against ending the TCU-SMU football game					*neither for nor against ending the TCU-SMU football game*				*very much in favor of ending the TCU-SMU football game*		Decline

6. Please indicate your attitude toward the individual mandate part of Obama's health care reform bill (fines for not buying health insurance)?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative					*neither positive or negative*				*very positive*		Decline

7. What is your attitude toward raising tuition at TCU?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against raising tuition					*neither for nor against raising tuition*				*very much in favor of raising tuition*		Decline

8. Please indicate your attitude toward erecting a 12-foot fence across the entire Southern border of the United States?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative					*neither positive or negative*				*very positive*		Decline

9. What is your attitude toward allowing parental access to student health records?

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very much against allowing parental access					*neither for nor against allowing parental access*				*very much in favor of allowing parental access*		Decline

10. Please indicate your attitude toward raising the federal debt ceiling (the statutory limit on the amount of US federal debt held by the government).

-5	-4	-3	-2	-1	0	+1	+2	+3	+4	+5	99
very negative					*neither positive or negative*				*very positive*		Decline

Questions about Memory Test

Instructions: Please answer the following questions over the memory test that you just completed.

1. How accurate do you think your responses were for the memory test?

1	2	3	4	5	6	7
not at all accurate						*very accurate*

2. How confident were you of your responses for the memory test?

1	2	3	4	5	6	7
not at all confident						*very confident*

3. How many of the 10 questions do you think you got right (i.e., marked the same answer you marked on the earlier questionnaire)? Circle one answer:

0 1 2 3 4 5 6 7 8 9 10

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ABSTRACT

EFFECTS OF MOTIVATION TO LIE ON
MISREPRESENTATION AND MEMORY ERRORS

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Past research has shown that when people describe or imagine events that did not actually occur, they can later mistakenly remember that those events did occur. These memory errors can occur even for their own actions, including past attitude reports. In addition, the more people misrepresent past actions, the greater the memory errors. The present experiments investigated two motivational factors that might cause people to differ spontaneously in the extent to which they lie about their own past attitude-relevant actions. Experiment 1 tested whether single college students would misrepresent their own previous attitude reports more to a disagreeing opposite-sex student who was single than to one who was already in a committed relationship. Experiment 2 tested whether college students would misrepresent their own previous attitude reports more to a disagreeing same-sex student who could reward them than to one who could not. Both experiments further tested whether differences in the level of misrepresentation would cause differences in what participants remembered about their own previous attitude reports. Although participants in Experiment 1 misrepresented their past attitude reports when given an opportunity to lie, the single vs. committed manipulation caused no differences in the level of misrepresentation or memory. The reward manipulation in Experiment 2 did cause differences in both the level of misrepresentation

and memory. The results are discussed in terms of source monitoring framework, false memories, differences between memory and attitude processes, and self-deception.