

THE EFFECT OF SELF-ESTEEM ON AUTOBIOGRAPHICAL RECALL

by

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A THESIS

Presented to the department of Psychology
and the Honors College of the University of Oregon
in partial fulfillment of the requirements
for the degree of
Bachelor of Arts

May 1990

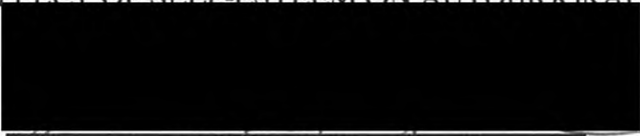
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An Abstract of the Thesis of
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in the Department of Psychology to be taken May 1990

Title: THE EFFECT OF SELF-ESTEEM ON AUTOBIOGRAPHICAL RECALL

Approved:


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Past research has demonstrated that induced attitudes and moods distort recall of personal memories. Many studies have revealed how attitudes can be shifted by persuasive messages. People are inclined to change behaviors and attitudes to act in accordance with someone they respect or think they should respect. This research has also shown that memories may be encoded in a context-specific manner. That is memories may be stored with respect to the emotions that were elicited at the time of the event. Recall of specific events is easier when present mood matches the mood of the memory. This study examines whether self-esteem distorts autobiographical recall as attitudes and moods do. Specifically, does induced self-esteem make memories of questionable morality (cigarette smoking and cheating) difficult to recall. The results were mixed. The hypothesis that subjects who received the self-esteem inducement would not recall the events of questionable morality was true for women. The hypothesis was not supported by men. It is concluded that sex-role standards imposed by Western society may have caused the observed differences.

ACKNOWLEDGMENTS

The author extends special thanks to Shinobu Kitayama whose assistance was invaluable. In addition, sincere appreciation is due to Professors Dennis Todd and Gordon Goles for their cooperation and technical advisement in the preparation of this manuscript.

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CHAPTER I

INTRODUCTION

Purpose

In my study, I examine whether autobiographical or personal memory is distorted by the temporary change in self esteem. Drawing on past research that relates attitudes and moods to memory. I want to see whether enhanced self-esteem distorts recall of one's personal cigarette use and cheating history. That is, does a good self image and positive feeling of self make past behaviors of questionable morality difficult to recall?

Literature Review

People's personal memories are relevant to some of the traditional interests of social psychologists, including self-understanding and self-presentation. Self-perception influences how people remember past attitudes and behavior. Psychologist Lloyd Morgan (1930/1961) suggests that personal recall involves an active, constructive process that is guided by people's knowledge at the time of retrieval. An individual starts by noting his or her present status on the attribute or attitude on a question. The present serves as a reference point because it is more salient or prominent than a person's earlier position on the attribute. Therefore, construction of the past may consist largely of characterizing the past as different from or same as the present. And because people often adopt a theory of consistency in the face of change, they may exaggerate the similarity of the past to the present (Ross, 1988).

In Michael Ross's paper, *Relation of Implicit Theories to the Construction of Personal Histories*, he reviews several studies that examine personal recall with respect to self-perception. It seems that people are inclined to see their behavior as consistent over

time; however, they do see alterations in themselves. Individuals can maintain a sense of personal identity in the face of change by explaining how their current self emerged from an earlier version. When constructing personal histories, people may presume coherence by connecting what is unconnected (Ross, 1988).

People selectively recall their past behaviors to make them consistent with their current attitudes. When attitudes influence the recall of past actions, a review of past behaviors may increase the person's degree of commitment to his or her attitudes. There are two reasons the increase of commitment could occur. First, the person's past behavior may appear to validate the current attitude. For example, suppose that someone persuades me that I like to drink beer on the weekends. I should then recall drinking beer more frequently than if I had been persuaded that I dislike drinking beer. Thus, past behavior is seen to be consistent with current attitudes; as a result, there is support for my present attitudes. Second, past behavior is non-changeable, which seems to bind the person to the attitude. Therefore, attitudes alter recall, which influences the person's commitment to those attitudes (Ross, McFarland, Conway, & Zanna, 1982).

A number of researchers have examined people's recall of their earlier opinions after they have experienced an experimentally induced shift in attitudes. The typical finding is that people exaggerate the consistency between their present (new) attitudes and their past opinions.

In a study by Goethals and Reckman (1973), massive attitude change over a controversial topic (busing to schools to attain racial balance) was demonstrated when a persuasive argument was presented by a respected peer. Goethals and Reckman found that people changed original attitudes after hearing the persuasive argument. And when the students who had the attitude shift were asked to recall their attitudes before the argument, they reported no change from their previous attitude. Presumably, their current attitudes toward busing are salient to them at the time of recall. Goethals and Reckman explained the results in terms of cognitive dissonance theory. Cognitive dissonance is a state of mind

where a person experiences discomfort as a result of conflicting ideas. One way people deal with cognitive dissonance is to convince themselves that their attitudes have not really changed from earlier positions, much like the subjects in the Goethals and Reckman's study. Furthermore, this consistency of attitudes is not attained through a conscious process. In other words, people are unaware of the shift in attitudes. They honestly believe their attitudes are consistent.

In a similar study conducted by Michael Ross (1985), the attitude-consistency effect in recall was replicated using a different topic and attitude-change manipulation. His subjects were presented with a tape-recorded persuasive message by a noted medical authority, who argued that vigorous exercise was more harmful than beneficial. Pretesting indicated that subjects exposed to this message subsequently held more negative attitudes toward exercise than those subjects in the control group, who did not hear the message. After hearing the message, subjects were asked to recall their attitudes they had reported on a questionnaire that they had filled out three to four weeks earlier. Consistent with past research, subjects exposed to the persuasive message recalled reporting significantly more negative attitudes toward exercise than did subjects who had not heard the message (Ross, 1988).

Therefore, in all the studies a trend develops. People continually present themselves in such a way that their behavior and attitudes and the recall of their behavior and attitudes are consistent. Present attitudes seem to play a large role in how people recall the past, as demonstrated by Goethals and Reckman and Ross. However, as the studies reveal, there is a discrepancy between present and past attitudes and behavior, which indicates the memory has been distorted.

In the study, *Effect of Induced Elation-Depression on the Accessibility of Memories of Happy and Unhappy Experiences*, by Teasdale, Taylor, and Fogarty, induced mood produced a definite effect on the types of memories recalled. Subjects had elated and depressed moods induced by reading 30 cards that contained self-referent mood induction

statements. Each subject was seen on three occasions. On the first two occasions, subjects received a depressed mood or elated mood induction. Following mood induction subjects were presented with a series of words and asked to recall a past real-life experience associated with each word and briefly to describe the experience. On the third visit these experiences were rated for their happiness and pleasantness. Latency of retrieval, the amount of time it takes to recall a certain event, of the memories in the first two sessions was also measured (induced sadness can also be measured because it takes longer to recall when unhappy). This experimental design measures mood congruence in memory. That is, material whose emotional valence matches a person's current mood is generally more likely to be recalled.

To induce depression the cards had statements such as, "Things aren't quite like I would like them to be," progressing through more depressing statements as, "I feel downhearted and miserable." For elation mood induction, initial statements were mildly euphoric in content, for example, "All in all, I'm pretty pleased with the way things are going," proceeding to "Life is so full and interesting it's great to be alive!" to statements like, "I feel so good I almost feel like laughing." After the mood induction, subjects were asked to recall specific experiences that related to cue words such as train, ice, wood, letter, house, etc. Those subjects who had the elation induction recalled happy experiences while those who had received the depression induction recalled unhappy experiences.

The results of this study indicate that mood has an effect on both positive and negative cognitions because induced mood differentially affects the probability of retrieving memories of happy or unhappy past experiences. These results suggest that mood serves as a context in which particular memories are easier to recall if the present mood matches the type (happy or unhappy) memory. Thus, it would seem that people encode and retrieve memories on a context-specific basis (Teasdale, Taylor, and Fogarty, 1980).

In a later study by Teasdale and Taylor, *Induced mood and accessibility of memories: An effect of mood state or of induction procedure?* (1981) the possibility that

the way moods are induced opposed to mood itself caused the past results of accessibility of certain memories is explored. Teasdale and Taylor examine whether the accessibility effects obtained resulted from differences in moods induced or from differences in the procedures used to induce moods.

In a study by Teasdale et al. (1980), the subjects reads mood-relevant self-statements, for example "I feel alert, happy, and full of energy", "Life is so interesting it's great to be alive!" (elation induction), and "Looking back on my life, I wonder if I have accomplished anything worthwhile" (depression induction). It is possible that because some of the self-statements refer in general terms to aspects of the person's life, specific life experiences could be elicited by certain self-statements. These thoughts might then prime the general class of memories happy/unhappy and, in this way, produce the observed pattern of results. Thus, the induced mood would have no mediating effect and would simply be an irrelevant effect of the mood induction procedures.

If mood is indeed the important determinant of the effects on accessibility, then eliminating all reference to aspects of the person's life from the mood induction self-statements, while retaining their capacity to change mood, should not abolish the effects on accessibility. However, if the reference to life experiences in the mood induction statements is necessary for accessibility, eliminating such reference should abolish the effects on accessibility.

To test these possibilities, Teasdale and Taylor retained the same experimental design used in the Teasdale et al. (1980) study except (1) the original three sessions were compressed into one, (2) the mood induction procedures were modified along the lines indicated, and (3) subjects were asked to indicate the extent to which they had thought of aspects of their life situation and experience during the mood induction procedure.

The results of this study were exactly like those in the 1980 study. Happy and pleasant memories were more probable in the elated mood than in depressed mood. The extent of differences in accessibility between mood conditions correlated with the extent to

which mood actually differed between conditions. There was no relationship between the extent of differences in accessibility and the extent to which subjects reported thinking about their life circumstances during the mood inductions. Thus, observed differences in accessibility result from the differences in mood induced rather than directly from the differences in mood induction procedures (Teasdale and Taylor, 1981).

In a 1984 study conducted by Silvia Mecklenbrauker and Willi Hager, the hypothesis of mood-state-dependent retrieval was tested. Using the same kind of self-referent statements to induce mood the researchers found support for mood-state-dependent retrieval. The phenomenon of mood-state-dependent retrieval is that under certain conditions recall is higher when mood at test matches mood at input than when it does not match. That is, one will have greater accessibility to a memory of some event if mood at time of recall matches the mood at the time of the event. This phenomenon reveals the influence of context on remembering, and it is compatible with the encoding specificity notion. The existence of a mood-dependent retrieval effect constitutes evidence that memory traces include attributes or elements that represent emotional states.

The study, *Mood and Self Efficacy: Impact of Joy and Sadness on perceived Capabilities*, by David Kavanagh and Gordon Bower, discusses the impact of happy and sad moods on efficacy judgments concerning a variety of activities. The researchers worked from the hypothesis that "... emotions act like a filter through which people view efficacy information, determining which items of information become available and salient, and which frameworks people use to interpret and evaluate these selected data."

Support for their claim comes from the information found in memory studies that document the effect of emotions on memory. The last three studies indicate that recall of memories are vulnerable to influences of mood. Experiences when people are happy or sad are more accessible later when they are feeling the same way. Recall of successes and failures exhibit this since they often give rise to strong emotions and become associated with them. This suggests that people are also likely to interpret their recalled performances

as being consistent with their mood. Thus, people will recall successful performances when they are happy and poor performances when they are sad.

The experiment reported by Kavanagh and Bower focuses on the impact of emotions on self-efficacy by assessing the extent to which recall of a highly emotional success or failure in romance generalizes to efficacy regarding a wide range of other activities. Subjects recalled successively their most successful or unsuccessful romantic encounter to induce a happy or sad mood. Once the mood was attained, the subjects were asked to rate on a 10 point scale their perceived ability or efficacy on a wide range of abilities involving romantic situations, social skills and assertiveness situations, academic ability, and athletic skills. Inducing a happy or sad mood through recollecting romantic success or failure greatly influenced perceived efficacy for all the activities at question.

Kavanagh and Bower conclude that mood-dependent memory suggests that the emotion one feels at the time of a judgment will activate those memories and opinions that are congruent with that emotion (mood congruence). This activation causes those ideas to become available in short term memory, thus to bias judgment. They also believe that whatever one's average level of aspiration, when one experiences a performance better or worse than expected that episode will be stored in association with the emotions the experience elicit. This assertion agrees with Teasdale, Taylor, and Fogarty's (1980) belief of context-specificity (Kavanagh and Bower, 1985).

David Haaga reinforced support for mood congruence in his 1989 study. Haaga replicated past results by using similar mood inducing procedures used in Teasdale and Taylor (1981), self-referent statements that omit reference to personal experience, and the procedure used by Bower (1985), autobiographical recollections of happy or sad content. His results further the notion that certain memories are more easily recalled if the present emotional state matches that emotional state of the memory (Kavanagh & Bower, 1985).

All these studies suggest emotional states have a large impact on how we encode and recall past events. Mood congruence, the phenomenon that memories of certain

emotional content are more easily remembered when in that emotional state, was demonstrated in several of the studies (Teasdale, 1980; Teasdale & Taylor, 1981; Kavanagh & Bower, 1985). The existence of mood congruence suggests that memories are encoded on a context-specific basis. Therefore, memories of happy or pleasant content will be more readily recalled when in a happy mood, conversely memories of sad or negative content are more easily remembered when in a sad or depressed mood.

CHAPTER II

JUSTIFICATION

In my study, I plan on looking at how memory is distorted by present self perception rather than by an attitude(s) toward a specific issue or an induced mood. Instead of manipulating the subject's attitude with a persuasive speech or mood induction, I plan on manipulating the subject's present self perception with a series of questions that will prime positive feelings about personal morality. Because the questions on past behavior concern activities that have negative connotations (cigarette use and cheating), I believe priming a positive self perception will make memories concerning these particular events difficult to recall without distortion.

I believe my study is relevant because research by Conway and Ross (1984) suggests that people with a favorable self-evaluation are more supportive of improvement programs like regular exercise. I assume then those people would also view cigarette use negatively. Another study, by McFarland and Ross (1987), suggests that people recall their past attributes as being worse in the past when views of self became more negative over time. Therefore, I believe that manipulating a self perception test, to heighten a positive self-evaluation, will alter the person's personal recollection of cigarette use and cheating history.

I hold this manipulation of self perception will indeed alter or distort recall because positive self perception will be primed by the statements directed at high self esteem just as the self referent statements worked to induce specific moods. I think the mortified self perception test will make good feelings of self more salient or prominent, which in turn, will influence how subjects answer the questions about cigarette use and cheating, because the times people used cigarettes or cheated will not be times associated with a positive self-

evaluation. This assumption is supported by the studies that demonstrate mood congruence, especially the study of self efficacy that shows that personal events are stored in memory on a context-specific basis. Since I believe cigarette use and cheating will be stored in the memory with more negative than positive feelings of self, those subjects who receive the prime for positive self-perception will not recall those events to the same extent as those subjects who will not receive the prime.

CHAPTER III

METHOD AND PROCEDURE

Subjects

Two different questionnaires were filled out by one hundred four randomly selected University of Oregon students. Data from 28 subjects who failed to report their gender were not analyzed. Responses from thirty-nine males and thirty-six females were used for data analysis.

Materials

Two separate questionnaires were used. Each subject received the cigarette/cheating questionnaire some questions assessed memory of subjects past behaviors in each domain (e.g., "How many times have you tried cigarettes?", "How old were you when you first cheated in school?") Whereas some other questions asked their attitudes toward each issue (e.g., "Do you think the American Cancer Association does an effective job in discouraging smoking?") (see appendix A). The cigarette/cheating questionnaire was followed by *The Panas*, which is a scale used to measure present emotional state. Ten words that describe feelings and emotions are presented: e.g., interested, irritable, alert. Five of the ten words describe positive attributes and the other five, negative attributes. The subject is instructed to indicate the extent to which he/she feels each way at that moment. This is rated on a scale from one (very slightly) to five (extremely) (see appendix B).

Right before filling out the cigarette/cheating questionnaire, half of the subjects were given a set of questions designed to prime positive images of self. The other half did not receive this manipulation. Examples of the statements are: "I feel that I am a person of

worth, at least on an equal plane with others." "All in all, I am inclined to feel that I am a success." "I have a lot of respect for my self." The subjects were instructed to briefly reflect on a time or event the statement described and then to indicate how often they felt that way. Here the subjects were given four choices: (1) occasionally, (2) sometimes, (3) often, (4) usually (see appendix C).

Procedure

The subjects in this study volunteered to fill out the questionnaire. They were approached by a female experimenter while studying at the EMU fishbowl. Prior to filling out this questionnaire, subjects were asked if they would mind taking a few minutes to fill out a survey for the experimenter's senior thesis. After a few minutes, the experimenter would retrieve the questionnaire and answer any questions the survey might have produced.

The survey was prefaced by a page that read, "The following questionnaire contains several relative statements concerning important social issues. This questionnaire's purpose is to find out how these social issues relate to students at the UofO. If you agree to participate in this survey, your name is not asked for; thus, total anonymity is ensured." The intention was that subjects would concentrate more on the social relevance of the questions concerning cigarette use and cheating history rather than the purpose of the positive self-esteem inducement.

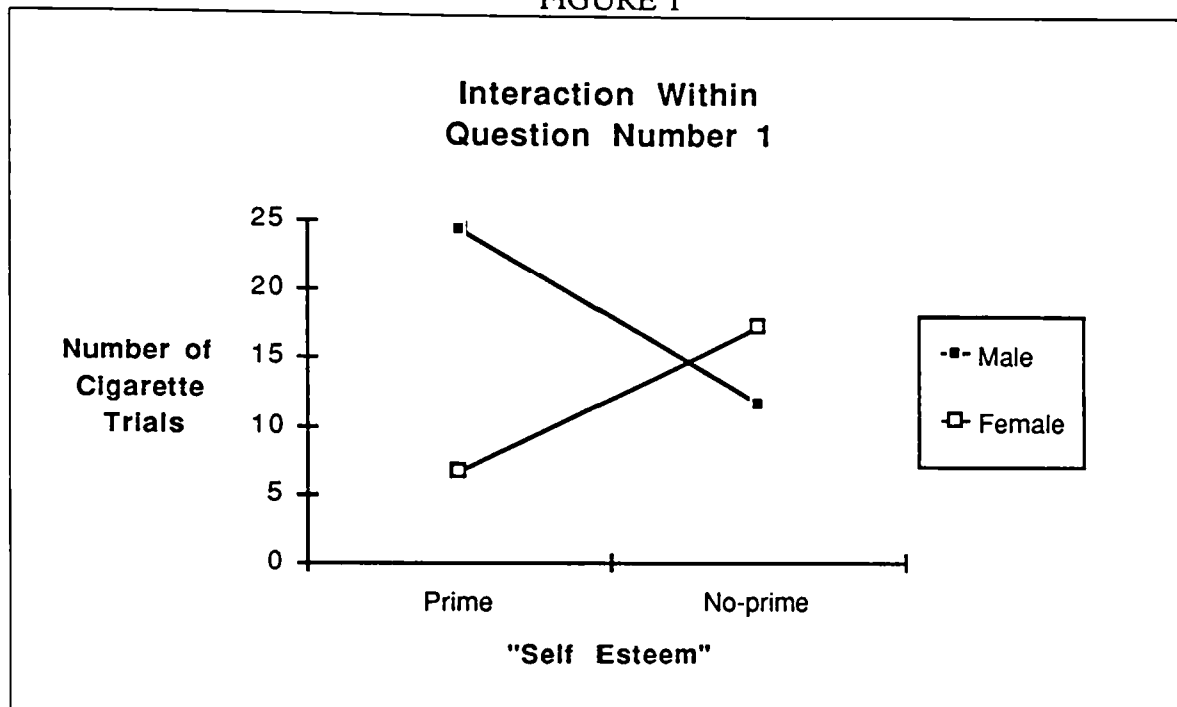
To eliminate potential bias the experimenter passed out the two versions of the questionnaire to the subjects in a random order. The experimenter was unaware of who received which questionnaire.

CHAPTER IV

RESULTS

Analysis of variance (ANOVA) was used to analyze the mean ratings. A separate ANOVA was performed on each question. In these analyses, effects of two factors were tested: subjects' sex and self-esteem manipulation. Out of all the questions on the cigarette/cheating questionnaire only the first question, "How many times have you tried cigarettes?" showed any significant results. The hypothesis that subjects who received the self-esteem induction manipulation would report smoking fewer times than those who did not receive the self-esteem manipulation was true for female subjects. Female recipients of the self esteem induction (prime condition) reported an average of 6.7 times compared to 17.3 times for the women, who did not have the esteem induction (no prime condition). However, the prediction was not supported for men, who reported more smoking trials when their questionnaire began with the self-esteem induction (24.5 times) than when they did not have the questionnaire with the esteem induction (11.7 times). As can be seen in Figure 1, there was no significant sex difference in the no prime condition. But in the prime condition males reported a significantly greater number of smoking trials than the females. Statistically, this interactive pattern was highly significant, $F(1,71) = 7.79, p < .01$. Thus, the effect of self-esteem manipulations depended on the subjects' gender.

FIGURE 1



M: PR > N-PR

F: PR < N-PR

Analysis of variance on the the other questions produced nothing of significance (see Table 1, Appendix D). There was no interaction effect between the self-esteem prime and the subjects' answers to the Panas, that is, feelings and emotions were not influenced in any way by the prime. Nor was there any indication that affect (positive or negative), measured by the Panas, had any interaction with the responses to the cigarette/cheating questionnaire. The responses to the self-esteem portion were analyzed to see if there was any difference between subjects who indicated high or low self-esteem and whether that interacted with the responses to the cigarette/cheating part; there was no measured effect.

CHAPTER V

DISCUSSION

The results of this study prompts many questions. First, why was there only one observable interaction within the entire questionnaire? It could be assumed that the self-esteem (SE) prime was extremely weak and, as a result, its effect may have been only temporary, lasting only for an extremely short period. Thus, a significant effect of the manipulation emerged only for the first questionnaire item.

Second, what might explain the difference between the females and males and their divergent answers to the first question of the cigarette/cheating portion of the survey, "How many times have you tried cigarettes?" Why would men who received the self esteem prime report smoking more times than females did in both conditions, with an average of 24.5 times compared to women who in the self-esteem condition reported 6.7 times and 17.3 times without the SE prime?

While this result is not consistent with the original hypothesis the issue may be much deeper than the effectiveness of the self-esteem prime. It appears that the result is directly related to the difference between men and women. To start, it may be important to look at the SE prime itself. Many of the attributes mentioned are traditionally masculine, such as, I feel that I am a success, I feel that I am on an equal plane with others, I am able to do things as well as other people, I take a positive attitude toward myself. Many of these traits characterize the white, corporate businessman.

Men and women's behavior is categorized by sex-role standards. Traditionally in Western culture, men are seen as dominant, independent, assertive and competitive, which are the characteristics expressed in the SE prime. The typical girl is described as submissive, dependent, sensitive to the needs of others, and cooperative. These attributes

are regularly reinforced in western countries by parents, teachers, peers, and television, all of which encourage the sexes to adopt culturally prescribed sex-roles.

According to Albert Bandura (1977), children acquire a large percentage of their sex-typed behavior by observing and imitating same-sex models. Many studies have shown that boys are reinforced for acting and playing in a masculine way and punished for acting or playing with feminine things. Girls also are reinforced for acting feminine and discouraged from acting masculine. It seems that we tend to model the behaviors of the people we respect. This was clearly demonstrated in the Goethals and Reckman study where people readily changed their attitude toward a controversial topic after listening to a respected peer. This kind of attitude change was replicated by Michael Ross (1985). When subjects' positive attitudes toward exercise were challenged by a recording of a supposed medical authority who suggested exercise was harmful, people reported much more negative feelings toward exercise after listening to the tape. Therefore, people are inclined to change behaviors and attitude to act in accordance with someone they respect or think they should respect.

An interesting study was conducted by Philip Goldberg in 1968 that showed men and women alike have a tendency to undervalue the accomplishments of females. This is true even when men and women are asked to explain their own successes. Men consistently claim that ability was responsible for their successes whereas females explain their performances on the basis of luck.

Studies have shown that this kind of evaluation of self is reinforced by teachers. Carol Dweck (1983) found that elementary school teachers often react to academic successes by praising girls for their perseverance or hard work and boys for their problem-solving ability. By contrast, teachers are more inclined to attribute failures to poor problem-solving strategies when criticizing their female students. It is no wonder then that women have a decreased self perception in regard to ability; they are led to believe that their hard work, not their innate ability, has produced their successes (Shaffer, p. 358-364).

It is possible then this SE manipulation is effective only for males. Women may not see themselves as successful or on an equal plane as others because these are not characteristics women are taught to adopt. Therefore this manipulation may be ineffective for females even if the ones surveyed did have a high self esteem. Perhaps, if the SE prime had had a more feminine or androgynous nature the same response pattern might have resulted for men and women. But then, why did men respond in a way completely opposite to the hypothesis?

Another explanation could be that this occurrence is attributable to sex differences and societal expectations. In American culture, a double standard has long existed between men and women that causes them to be judged differently for similar behavior. Men are encouraged to experiment and explore their environment, those who do not may be labeled as a "sissy" or unmasculine. And questionable behavior is accepted as the maxim "Boys will be boys" illustrates. On the other hand, women are encouraged to be demure and reserved; otherwise they may find themselves being shunned and called unladylike. Many men pride themselves on their number of exploits, whether it be their physical prowess or their courage to try something new. Good examples might be their enthusiasm to talk about the number of their sexual encounters or their ability to consume vast quantities of alcohol due to a "high tolerance." It is not uncommon to see men make challenges and bets regarding these aspects of their lives; these are the "good ol' boys." Yet, society stresses that "good girls don't and shouldn't." Women, unlike men, find themselves downplaying their exploits and taking pride in their relative inexperience whether it be sexual, drug related, or anything else concerning questionable morality. Women may admit to fewer exploits where men may be tempted to exaggerate theirs.

It is possible that the present SE manipulations reminded the subjects of the image of an autonomous, risk-seeking man, accompanied by a truly reserved lady-like woman, or of a set of implicit, explicit sex-role norms and stereotypes associated with male images. This manipulation, as a result, might have temporarily induced the male subjects to see

themselves as more masculine and risk-seeking and the female subjects to see themselves as more reserved and lady-like. This interpretation is consistent with the general hypothesis suggested by Michael Ross, that people selectively recall the past to match present or salient attitudes.

It has been shown that sex-typing is a continuous process and that an adult's enactment of traditional sex-role behaviors may depend more on the utility of these responses at any given time than on any overriding personal desire to be "masculine" or "feminine." Whereas new fathers become more concerned with their breadwinner function and new mothers become more nurturant, which expresses highly sex-typed, stereotypic behavior, in middle age these same men become more compassionate and expressive and the women become more autonomous.

Thus, the age of the subjects may have been an important factor concerning the results in this study. All of the subjects fell in the range of 18 and 25 years old, which is the time when most individuals look toward more permanent relationships and commitments. Perhaps then, during this time period of the subjects' lives it is in their best interest to act in accordance with their sex-roles which will enable them to be more attractive to a potential mate. In other words, men in this age group would exhibit extremely masculine traits as a means to acquire a mate and secure their future as a male. The same is true for females (Shaffer, p. 369-370).

Therefore, it is not surprising that the men who received the SE prime reported more smoking trials; it could be the SE prime elicited "macho" feelings about self, which summoned memories of their past exploits including experimentation with cigarettes. The SE prime could also be viewed as a challenge to remember like a bet of sorts. Men who did not have the SE prime may not have felt confronted in the same way and thus did not feel obligated to elaborate on their smoking experience. Women with the SE prime may have reported fewer smoking trials because, according to the literature and the hypothesis they were less able to recall the times they did not act in accordance with their high self-

esteem. These results from the males and females would be compatible with Michael Ross, McFarland, Conway, and Zanna's (1982) finding that people selectively recall their past to make it consistent with their current attitudes (in this case the attitudes elicited by the SE prime). As mentioned in the literature review, people continually present themselves so that their behavior and attitudes and the recall of their behavior and attitudes are consistent. Present or salient attitudes have a large influence on how people recall the past.

Or it could be that the self-esteem prime caused the women to consciously downplay their experience to answer in accordance with society's expectation of them. The women who did not receive the prime probably gave a more accurate account of their smoking experiences as did the men who did not receive the prime because neither felt pressured or challenged to answer in an "acceptable" manner.

It is truly difficult to conclude from this study whether induced self-esteem has an influence like induced moods or attitudes to distort recall of autobiographical memories demonstrated by the studies in the literature review. Although there was an interaction between the self-esteem prime and sex on the question concerning cigarette smoking, it is impossible to know if the interaction was caused from induced self-esteem prime itself or sex-role standards. Most likely it is a combination of the two.

APPENDIX A
CIGARETTE/CHEATING QUESTIONNAIRE

Indicate your sex: Male or Female

Please answer the following questions.

1. How many times have you tried cigarettes?
 - a. Never to once
 - b. Twice to twenty times
 - c. Twenty to fifty times
 - d. I smoke regularly
2. How old were you the first time you tried cigarettes? (If you never tried them how old on an average were your friends and acquaintances?)
 - a. grammar school (K-4)
 - b. Pre to early teens (10-14)
 - c. High School (15-18)
 - d. Over 18
3. I. Do you feel a law should be passed to remove smoking sections from restaurants altogether?
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree

II. Do you feel smoking should be banned on commercial airliners?

 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
4. Do you think the American Lung Association does an effective job in discouraging smoking?
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
5. Do you think cigarettes should be outlawed?
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree

6. Have you ever been tempted to cheat?
 - a. Never to once
 - b. Twice to twenty times
 - c. Twenty to fifty times
 - d. I cheat regularly
7. How old were you when you first cheated in school?
 - a. grammar school (K-4)
 - b. Pre to early teens (10-14)
 - c. High School (15-18)
 - d. Over 18
 - e. Never
8. Do you think that cheating is wrong regardless of the situation?
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
9. Do you think giving answers is as "bad" as copying someone else's work?
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree
10. Do you think cheating is effectively discouraged here at the Uof O?
 - a. Strongly agree
 - b. Agree
 - c. Disagree
 - d. Strongly disagree

APPENDIX B

THE PANAS

Directions: This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you feel this way right now, that is, at the present moment. Use the following scale to record your answer.

1	2	3	4	5
very slightly	a little	moderately	quite a bit	extremely
_____	interested		_____	irritable
_____	distressed		_____	alert
_____	excited		_____	ashamed
_____	upset		_____	inspired
_____	strong		_____	nervous
_____	guilty		_____	determined
_____	scared		_____	attentive
_____	hostile		_____	jittery
_____	enthusiastic		_____	active
_____	proud		_____	afraid

APPENDIX C SELF-ESTEEM PRIME

Circle: Male or Female Age: _____ Year in school: _____

DIRECTIONS:

Circle the response that most accurately matches how you feel moderately agree - Agree - Strongly agree. Briefly reflect on a time or event when you felt the same way the statement suggests.

1. I feel that I am a person of worth, at least on an equal plane with others.

Moderately agree---Agree---Strongly agree

2. All in all, I am inclined to feel that I am a success.

Moderately agree---Agree---Strongly agree

3. I feel that I have a number of good qualities.

Moderately agree---Agree---Strongly agree

4. I am able to do things as well as most other people.

Moderately agree---Agree---Strongly agree

5. I feel I have a lot to be proud of.

Moderately agree---Agree---Strongly agree

6. I take a positive attitude toward my self.

Moderately agree---Agree---Strongly agree

7. On the whole, I am satisfied with myself.

Moderately agree---Agree---Strongly agree

8. I have a lot of respect for myself.

Moderately agree---Agree---Strongly agree

9. I think I am a useful person.

Moderately agree---Agree---Strongly agree

10. Most of the time, I think I am a good person.

Moderately agree---Agree---Strongly agree

APPENDIX D
ANALYSIS OF VARIANCE ON CIGARETTE/CHEATING QUESTIONNAIRE

Table 1

1. How many times have you tried cigarettes?

DEP VAR:	Q(1)	N: 75	MULT.R: .365	SQUARED MULTIPLE R: .134	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	24.379	1	24.379	0.076	0.783
SEX	674.475	1	674.475	2.116	0.15
COND*					
SEX	2481.488	1	2481.488	7.785	0.007
ERROR	22631.658	71	318.756		

2. How old were you the first time you tried cigarettes?

DEP VAR:	Q(2)	N: 72	MULT. R: .139	SQUARED MULTIPLE R: .091	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	6.421	1	6.421	0.294	0.590
SEX	11.980	1	11.980	0.547	0.462
COND*					
SEX	6.903	1	6.903	0.315	0.576
ERROR	1488.121	68	21.884		

3. Do you feel a law should be passed to remove smoking sections from restaurants altogether?

DEP VAR:	Q(3)	N: 75	MULT. R: .113	SQUARED MULTIPLE R: .013	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	3.295	1	3.295	0.743	0.392
SEX	0.246	1	0.246	0.055	0.815
COND*					
SEX	0.461	1	0.461	0.104	0.748
ERROR	314.938	71	4.436		

4. Do you feel smoking should be banned on commercial airliners?

DEP VAR:	Q(4)	N: 75	MULT. R: .166	SQUARED MULTIPLE R: .028	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	0.138	1	0.138	0.056	0.813
SEX	4.821	1	4.821	1.967	0.165
COND*					
SEX	0.015	1	0.015	0.006	0.938
ERROR	174.026	71	2.451		

5. Do you think the American Lung Association does an effective job in discouraging smoking?

DEP VAR:	Q(5)	N: 74	MULT. R: .182	SQUARED MULTIPLE R: .033	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	0.172	1	0.172	0.090	0.765
SEX	4.512	1	4.512	2.365	0.129
COND*					
SEX	0.008	1	0.008	0.004	0.948
ERROR	133.568	70	1.908		

6. Do you think cigarettes should be outlawed?

DEP VAR:	Q(6)	N: 75	MULT. R: .253	SQUARED MULTIPLE R: .064	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	14.438	1	14.438	3.717	0.058
SEX	0.638	1	0.638	0.164	0.686
COND*					
SEX	3.042	1	3.042	0.783	0.379
ERROR	275.763	71	3.884		

7. Have you ever been tempted to cheat?

DEP VAR:	Q(7)	N: 74	MULT. R: .228	SQUARED MULTIPLE R: .052	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	63.233	1	63.233	0.239	0.626
SEX	873.250	1	873.250	3.306	0.073
COND*					
SEX	48.912	1	48.912	0.185	0.668
ERROR	18488.203	70	264.117		

8. How old were you when you first felt tempted to cheat in school?

DEP VAR:	Q(8)	N: 74	MULT. R: .161	SQUARED MULTIPLE R: .026	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	6.604	1	6.604	0.628	0.431
SEX	14.043	1	14.043	1.335	0.252
COND*					
SEX	2.112	1	2.112	0.201	0.656
ERROR	736.375	70	10.520		

9. Have you ever actually cheated?

DEP VAR:	Q(9)	N: 75	MULT. R: .402	SQUARED MULTIPLE R: .162	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	14.118	1	14.118	0.066	0.798
SEX	2518.412	1	2518.412	11.788	0.001
COND*					
SEX	487.510	1	487.510	2.282	0.135
ERROR	15168.967	71	213.647		

10. How old were you when you actually cheated for the first time?

DEP VAR:	Q(10)	N: 71	MULT. R: .159	SQUARED MULTIPLE R: .025	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	24.383	1	24.383	1.315	0.256
SEX	1.119	1	1.119	0.060	0.807
COND*					
SEX	3.332	1	3.332	0.180	0.673
ERROR	1242.517	67	18.545		

11. Do you think that cheating is wrong regardless of the situation?

DEP VAR:	Q(11)	N: 75	MULT. R: .313	SQUARED MULTIPLE R: .098	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	2.807	1	2.807	0.931	0.338
SEX	11.313	1	11.313	3.751	0.057
COND*					
SEX	13.096	1	13.096	4.342	0.041
ERROR	214.515	71	3.016		

12. Do you think giving you answers to a classmate is as "bad as cheating?"

DEP VAR:	Q(12)	N: 75	MULT. R: .194	SQUARED MULTIPLE R: .038	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	0.794	1	0.794	0.358	0.551
SEX	1.797	1	1.797	0.810	0.371
COND*					
SEX	3.464	1	3.464	1.563	0.215
ERROR	157.403	71	2.217		

13. Do you think cheating is effectively discouraged here at the UofO?

DEP VAR:	Q(11)	N: 74	MULT. R: .261	SQUARED MULTIPLE R: .068	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	4.786	1	4.786	1.675	0.200
SEX	6.364	1	6.364	2.228	0.140
COND*					
SEX	2.589	1	2.589	0.906	0.344
ERROR	199.959	70	2.857		

Analysis of variance for positive and negative affect determined from the Panas.

DEP VAR:	POSITIVE	N: 75	MULT. R: .166	SQUARED MULTIPLE R: .027	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	0.021	1	0.021	0.036	0.851
SEX	0.445	1	0.445	0.763	0.385
COND*					
SEX	0.761	1	0.761	1.304	0.257
ERROR	41.445	71	0.582		

DEP VAR:	NEGATIVE	N: 75	MULT. R: .161	SQUARED MULTIPLE R: .026	
		ANALYSIS OF VARIANCE			
SOURCE	SUM OF SQ	DF	MEAN-SQ	F-RATIO	P
COND	0.346	1	0.346	1.289	0.260
SEX	0.200	1	0.200	0.743	0.392
COND*					
SEX	0.049	1	0.049	0.182	0.671
ERROR	19.068	71	0.269		

APPENDIX E MEAN AND STANDARD DEVIATION SCORES

Table 2

The following results are for:

sex: unknown

cond: self esteem (SE)

	Q(1)	Q(2)	Q(3)	Q(4)	Q(5)
#OF CASES	13	12	12	13	13
MINIMUM	0.000	0.000	1.000	1.000	2.000
MAXIMUM	51.000	20.000	7.000	7.000	6.000
MEAN	13.308	13.583	3.000	2.692	3.308
STAND. DEV.	17.684	5.744	2.089	2.057	1.316
	Q(6)	Q(7)	Q(8)	Q(9)	Q(10)
#OF CASES	13.000	13.000	12.000	13.000	11.000
MINIMUM	2.000	0.000	8.000	0.000	8.000
MAXIMUM	7.000	51.000	17.000	51.000	20.000
MEAN	5.385	22.769	11.250	15.462	11.909
STAND. DEV.	1.557	17.996	2.734	13.672	3.700
	Q(11)	Q(12)	Q(13)	POS	NEG
#OF CASES	13	13	13	13	13
MINIMUM	1.000	1.000	1.000	1.700	1.000
MAXIMUM	6.000	5.000	7.000	3.600	2.900
MEAN	2.615	3.077	3.538	2.446	1.697
STAND. DEV.	1.609	1.320	1.984	0.645	0.628
	SE				
#OF CASES	13				
MINIMUM	2.500				
MAXIMUM	4.000				
MEAN	3.391				
STAND. DEV.	0.516				

The following results are for:
sex: unknown
cond: no self esteem

	Q(1)	Q(2)	Q(3)	Q(4)	Q(5)
#OF CASES	15	15	15	15	15
MINIMUM	0.000	0.000	1.000	1.000	2.000
MAXIMUM	51.000	18.000	7.000	7.000	6.000
MEAN	20.533	12.600	2.533	2.267	3.533
STAND. DEV.	18.905	4.323	1.727	2.052	1.407
	Q(6)	Q(7)	Q(8)	Q(9)	Q(10)
#OF CASES	15	14	14	15	14
MINIMUM	1.000	0.000	5.000	0.000	0.000
MAXIMUM	7.000	51.000	16.000	51.000	20.000
MEAN	4.200	18.000	12.286	10.267	12.857
STAND. DEV.	1.935	15.105	3.811	12.475	4.721
	Q(11)	Q(12)	Q(13)	POS	NEG
#OF CASES	15	15	14	15	15
MINIMUM	1.000	1.000	2.000	1.400	1.000
MAXIMUM	6.000	6.000	7.000	4.400	2.200
MEAN	3.000	3.533	4.214	2.867	1.427
STAND. DEV.	1.464	1.552	1.847	0.857	0.345
	SE				
#OF CASES	0				
MINIMUM					
MAXIMUM					
MEAN					
STAND. DEV.					

The following results are for:
sex: males
cond: SE

	Q(1)	Q(2)	Q(3)	Q(4)	Q(5)
#OF CASES	19	18	19	19	19
MINIMUM	0.000	0.000	1.000	1.000	2.000
MAXIMUM	51.000	20.000	7.000	6.000	6.000
MEAN	24.526	14.222	2.316	2.136	3.526
STAND. DEV.	21.958	4.570	2.057	1.734	1.577
	Q(6)	Q(7)	Q(8)	Q(9)	Q(10)
#OF CASES	19	19	19	19	18
MINIMUM	1.000	0.000	6.000	0.000	6.000
MAXIMUM	7.000	51.000	18.000	51.000	20.000
MEAN	4.368	24.895	12.368	16.947	13.278
STAND. DEV.	2.087	20.014	3.113	17.539	3.177
	Q(11)	Q(12)	Q(13)	POS	NEG
#OF CASES	19	19	19	19	19
MINIMUM	1.000	1.000	1.000	1.700	1.000
MAXIMUM	7.000	6.000	7.000	4.200	2.600
MEAN	2.895	3.105	3.579	2.937	1.479
STAND. DEV.	1.997	1.629	1.953	0.797	0.466
	SE				
#OF CASES	19				
MINIMUM	2.500				
MAXIMUM	4.000				
MEAN	3.474				
STAND. DEV.	0.463				

The following results are for:
sex: male
cond: no self esteem

	Q(1)	Q(2)	Q(3)	Q(4)	Q(5)
#OF CASES	20	20	20	20	20
MINIMUM	0.000	10.000	1.000	1.000	2.000
MAXIMUM	51.000	20.000	7.000	6.000	7.000
MEAN	11.700	14.200	2.900	2.200	3.450
STAND. DEV.	17.454	2.802	2.245	2.016	1.395
	Q(6)	Q(7)	Q(8)	Q(9)	Q(10)
#OF CASES	20	20	19	20	19
MINIMUM	1.000	0.000	5.000	1.000	0.000
MAXIMUM	7.000	51.000	20.000	51.000	20.000
MEAN	4.850	21.350	12.632	23.000	11.632
STAND. DEV.	20323.000	15.994	3.700	18.058	5.069
	Q(11)	Q(12)	Q(13)	POS	NEG
#OF CASES	20	20	19	20	20
MINIMUM	1.000	1.000	2.000	1.700	1.000
MAXIMUM	7.000	7.000	7.000	4.100	2.800
MEAN	3.350	3.750	4.474	3.175	1.565
STAND. DEV.	1.954	1.650	1.467	0.796	0.523
	SE				
#OF CASES	0				
MINIMUM					
MAXIMUM					
MEAN					
STAND. DEV.					

The following results are for:
sex: female
cond: SE

	Q(1)	Q(2)	Q(3)	Q(4)	Q(5)
#OF CASES	22	21	22	22	21
MINIMUM	0.000	0.000	1.000	1.000	2.000
MAXIMUM	40.000	20.000	7.000	5.000	6.000
MEAN	6.773	12.762	2.591	1.773	3.048
STAND. DEV.	10.033	5.949	1.968	1.110	1.359
	Q(6)	Q(7)	Q(8)	Q(9)	Q(10)
#OF CASES	22	22	22	22	22
MINIMUM	1.000	2.000	7.000	0.000	0.000
MAXIMUM	7.000	51.000	18.000	50.000	18.000
MEAN	3.773	16.227	12.909	10.364	13.091
STAND. DEV.	1.875	12.478	3.115	11.253	4.174
	Q(11)	Q(12)	Q(13)	POS	NEG
#OF CASES	22	22	22	22	22
MINIMUM	1.000	1.000	1.000	1.100	1.000
MAXIMUM	6.000	6.000	7.000	4.200	2.600
MEAN	2.955	3.227	3.364	2.985	1.532
STAND. DEV.	1.676	1.232	1.529	0.770	0.476
	SE				
#OF CASES	22				
MINIMUM	2.400				
MAXIMUM	4.000				
MEAN	3.277				
STAND. DEV.	0.532				

The following results are for:
sex: female
cond: no self esteem

	Q(1)	Q(2)	Q(3)	Q(4)	Q(5)
#OF CASES	14	13	14	13	13
MINIMUM	0.000	0.000	1.000	14.000	14.000
MAXIMUM	51.000	19.000	7.000	1.000	1.000
MEAN	17.286	14.000	3.000	5.000	5.000
STAND. DEV.	21.574	4.796	2.857	1.714	2.929
			2.179	1.139	1.072
	Q(6)	Q(7)	Q(8)	Q(9)	Q(10)
#OF CASES	14	13	14	14	12
MINIMUM	3.000	3.000	10.000	0.000	0.000
MAXIMUM	7.000	51.000	20.000	30.000	16.000
MEAN	5.071	16.000	13.857	6.071	12.333
STAND. DEV.	1.269	16.197	2.931	7.731	4.497
	Q(11)	Q(12)	Q(13)	POS	NEG
#OF CASES	14	14	14	14	14
MINIMUM	1.000	1.000	1.000	1.900	1.000
MAXIMUM	4.000	6.000	7.000	4.000	2.900
MEAN	1.714	3.000	35.000	2.814	1.721
STAND. DEV.	0.914	1.414	1.829	0.653	0.630
	SE				
#OF CASES	0				
MINIMUM					
MAXIMUM					
MEAN					
STAND. DEV.					

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