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## Effect of Discounting on Self-Generated Attitude Change: A Person by Situation

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EFFECT OF DISCOUNTING ON SELF-GENERATED ATTITUDE CHANGE:  
A PERSON BY SITUATION ANALYSIS

by

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in partial fulfillment of the requirements for the degree of

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## Abstract

This research used a trait-based impression formation task to explore the effect of instructional set and opportunity for thought on inconsistency discounting. It was predicted that attitude polarization would be attenuated, regardless of opportunity for thought, when discounting incongruent information was difficult. When discounting incongruent information was easy, attitude polarization was expected to increase as opportunity for thought increased. The relationship between discounting and opportunity for thought was expected to be accentuated when individuals are low in tolerance for ambiguity. The results did not support these predictions. Explanations for the results are discussed and directions for future research are proposed.

## Self-Generated Attitude Change

### The Effect of Discounting on Self-Generated Attitude Change:

#### A person by situation analysis

When filling a position for a job, employers often have to assess various pieces of information about an applicant. By using multiple sources of information about applicants, personnel managers can evaluate a potential employee. On occasion, information from applications, resumes, references and interviews can be conflicting. For example, one letter of reference can describe the applicant as hardworking, another describes him/her as a self-starter, but a third reference describes the applicant as unfocused. The personal manager then has the difficult duty of evaluating this information in an effort to hire a good employee. After mulling over the entire applicant file, the personal manager bases his/her decision on the two positive references, perhaps ignoring the negative reference. She/he decides to offer the applicant a job. On a daily basis, personnel managers evaluate inconsistent information concerning job candidates. The present research seeks to understand how individuals (e.g., personnel managers) handle inconsistencies in their beliefs and its effect on attitude change.

#### Self-Generated Attitude Change

In his model of self-generated attitude change, Tesser (1978) posits two functional relationships. First, attitudes are a function of beliefs. Beliefs are cognitions about persons, objects, or events. Attitudes are the affective outcomes of our beliefs (McGuire, 1985). One's attitude depends upon one's beliefs about that person, object, or event. That is, feelings about attitude objects rely upon the ideas about those attitude objects. Second, beliefs dynamically change during thought (Tesser, 1978). These

changes are guided by an evaluative consistency principle. In general, beliefs become increasingly consistent and less ambivalent as a whole during thought (Leone, Taylor, & Adams, 1991). If attitudes are products of beliefs and beliefs become less ambivalent and more consistent with thought, then attitude polarization should occur with thought.

Attitude polarization is a more extreme evaluation of an attitude object in the direction of an individual's initial attitude. This relationship between attitudes, beliefs, and thought has been confirmed in many studies (see Tesser, 1978, for a review).

Attitude polarization is not the necessary result of extended thought. The presence of a stimulus can create a reality constraint that restricts the use of schemas and produces less polarization (Leone et al., 1991; Tesser, 1978). Leone et al. (1991) had participants think about their impression while providing a reality constraint restricting their beliefs (i.e., the visual presence of the person description). When comparing opinions to an objective reality, persons may discover that their beliefs do not match the objective reality. The presence of the reality constraint attenuated the effect of thought on attitude polarization. In addition, decreased attitude polarization can be the result of process constraints. Thought may illuminate the dubious validity of certain beliefs. These constraints prevent individuals from disregarding certain beliefs and focusing on consistent beliefs (Tesser, Leone, & Clary, 1978).

Moreover, attitude polarization is dependent upon well-developed schemas that provide a guide for thinking about persons, objects, and events in an evaluative consistent way (Chaiken & Yates, 1985). Schemas are generalized structures of knowledge about situations and events (Matlin, 1994). Tesser and Leone (1977) hypothesized that men



would possess a well-developed schema for football (not for fashions) and women would possess a well-developed schema for fashions (and not football). Consistent with this reasoning, the researchers found that males showed significantly more attitude polarization than females when asked to think about football, and females showed more attitude polarization than males when asked to think about fashions.

Under certain conditions, an individual's attitude toward a stimulus tends to polarize as an individual's opportunity for thought increases. Tesser (1978) hypothesized three microprocesses that increase the evaluative consistency of an attitude: generation, reinterpretation, and discounting. Specifically, attitude polarization is thought to be the result of generating beliefs consistent with one's attitudes, reinterpreting ambiguous beliefs so as to be consistent with one's attitudes, and/or discounting beliefs that are inconsistent with one's attitudes. Perceivers can generate new cognitions that make the present thoughts more evaluatively consistent. Sadler and Tesser (1973) found that thought produces more attitude polarization and an increased number of consistent thoughts. They had participants list their thoughts about their partners, including evaluations about each thought, regardless of whether a partner was liked or disliked. The increased opportunity in thought resulted in listing proportionally more thoughts consistent with their initial attitudes (Sadler & Tesser, 1973).

Tesser and Cowen (1977) found evidence to support the reinterpretation microprocess. Reinterpretation emphasizes the importance of context, where inconsistent beliefs are changed to better match the context of consistent beliefs. After the participants made some initial ratings, the researchers had them think for ninety seconds

or gave them a distraction task before re-rating the trait adjectives. In addition, an ambiguous tracer (trait) or an unambiguous tracer (trait) was included with the list of adjectives. Tesser and Cowen (1977) discovered that greater attitude polarization was associated with the ambiguous trait than the unambiguous trait. It appears that the ambiguous trait was more readily reinterpreted to better fit the context of the original attitude.

Tesser's (1978) discounting hypothesis is the third microprocess. It is the process by which the weight or the importance of a cognition declines. Discounting results in a functional loss of inconsistent cognitions (Tesser, 1978). Tesser (1978) argued that information might decline in importance when found inconsistent with a schema. When inconsistent information is discounted, the impact of the consistent information is bolstered and thereby produces attitude polarization. Researchers have not demonstrated that increased thought leads to discounting.

### Individual Differences

These microprocesses are not mutually exclusive. Some people may use generation, reinterpretation, or discounting, or any combination of the three. Personality differences may determine which microprocess is most relevant to the individual. Those low in the need for cognition are cognitive misers. They may focus on information readily available and are less likely to engage in any elaboration. Leone (1994) found that those low in need for cognition tend to generate evaluatively consistent beliefs with increased opportunity for thought.

Dogmatism has been found to moderate the relationship between thought and

attitude polarization (Leone, 1989). Those high in dogmatism tend to compartmentalize information and find inconsistent information aversive. Leone et al. (1991) found that the presence of reality constraints combined with increased opportunity for thought forces dogmatics to assess the validity of their beliefs. Consequently, dogmatics tend to polarize less than nondogmatics in the face of reality constraints.

Another personality factor beyond those previously explored is tolerance of ambiguity. Those who are intolerant of ambiguous stimuli tend to see things in black and white (MacDonald, 1970). They perceive ambiguous cues as threatening or disturbing. This causes the individual to distort or deny the credibility or congruence of the cue. Conversely, those who are tolerant of challenging information may perceive ambiguous stimuli as desirable (Furnham, 1994). Tolerance of ambiguity as a personality factor may distinguish those who readily tend to discount inconsistent information from those who embrace it. Specifically, those who are highly intolerant of ambiguous stimuli may discount inconsistent information because belief ambiguity is undesirable. If so, their beliefs will become more consistent, thus producing more attitude polarization.

### Discounting

Evidence of discounting has been shown in past impression formation studies (see Anderson & Jacobson, 1965). Past research on person memory has investigated the ways in which individuals deal with inconsistencies. Individuals are always forming impressions of people based on small amounts of information. These impressions towards others depend on one's perception of the information one has about them. Many times, these initial impressions must be evaluated in the face of inconsistencies. Several

researchers (Anderson, 1971; Anderson & Jacobson, 1965; Chaiken & Yates, 1985; Haire & Grunes, 1950; Hendrick & Costantini, 1970; Kaplan, 1973) have attempted to find the effects of inconsistency on impression and attitude formation.

This research on impression formation and evaluating inconsistent information can fall into one of two competing models. The first is Solomon Asch's change-in-meaning paradigm where words shift meaning from one context to another (Anderson, 1971; Anderson & Jacobson, 1965). An alternative model is that adjectives keep their meaning but they are assigned less weight or importance in the overall impression (Anderson, 1971; Hendrick & Costantini, 1970). This may occur because of attention decrement (progressive decrease in the attention of a serial list of adjectives) or discounting (reduction of influential weight of latter adjectives). Evidence for each model can be found in the impression formation literature.

Anderson and Jacobson (1965) used four different instructional sets to study discounting. In the first condition, participants were told that the traits describing a person were all equally important and should be evaluated equally. This instructional set discourages trait discounting. In the second condition, participants were told that the adjectives of a set may not all be equally valid. With these instructions, participants should exhibit any natural discounting tendencies that prevail. In the third and fourth conditions, participants were told that one of the adjectives did not actually apply, that they should decide which one was inapplicable, and base their impression on the other two adjectives. Here, discounting was explicitly promoted and served as a reference point for the second condition. The difference between the third condition and the fourth

condition was that the former had the participants say aloud which adjective they discounted whereas the latter had participants write down the adjective they discounted. The results indicated that a small discounting effect did occur in the naturalistic setting (the second condition).

### The Present Study

The present research sought to bridge the gap between the past impression formation studies and self-generated attitude change. Past research indicated that the generation of attitude congruent beliefs and the reinterpretation of inconsistent beliefs result in attitude polarization. Anderson and Jacobson (1965) have already shown that discounting can occur in impression formation. However, there has not been a direct assessment of discounting and its effect on self-generated attitude change. Anderson and Jacobson (1965) assumed that participants discounted inconsistencies when instructed to do so. Without incorporating a manipulation check, their results are suspect.

Calling to mind Tesser's (1978) conjecture that discounting may be a function of poor memory retrieval, a recall task as a manipulation check may be enlightening. Petty, Priester, and Wegener (1994) maintain that if an attitude is not immediately accessible, a person will search their memory for information to construct an attitude. Fiske and Taylor (1984) argue that under the guidance of a schema, making a judgement (e.g., forming an impression) improves recall of attitude relevant evidence. More importantly, information inconsistent with the schema may be attributed to transitory cause and summarily discounted (Fiske & Taylor, 1984).

Although not a proponent of schema theory, Wyer and Carlston (1994) also make

inferences about the mechanics and storage of information. Past research on the recollection of traits indicates that trait recall is improved when asked to form an impression about persons rather than merely memorizing traits (e.g., Hartwick, 1979). It appears that the nature of impression formation tasks shape the encoding and retrieval of traits. Wyer and Carlston (1994) speculate that when faced with inconsistency, individuals engage in inconsistency resolution (i.e., thought leads to the evaluation of inconsistent information which in turn creates stronger retrieval routes). Given more time, individuals reexamine the consistent information, which strengthens their initial impression. By bolstering the consistent information, individuals may be discounting the inconsistent information.

The present study explored whether inconsistency discounting also contributes to thought produced attitude polarization. Tesser (1978) asserts that discounting should mediate the relationship between attitude polarization and opportunity for thought. By incorporating the instructional sets of Anderson and Jacobson (1965) with a recall task, the present research sought to determine if inconsistency discounting was one of the processes underlying self-generated attitude change. The hypotheses were as follows:

1. As opportunity for thought increased, attitude polarization should generally increase.
2. (a) When discounting was difficult, the amount of attitude polarization would not vary as the amount of opportunity for thought increased, and (b) when discounting was easy, the amount of attitude polarization would increase as the amount of opportunity for thought increased.

3. Persons with low tolerance for ambiguity were more likely than persons with high tolerance for ambiguity to discount inconsistent beliefs and to experience thought induced attitude polarization. The difference between high and low tolerance for ambiguity would be greater given high opportunity for thought rather than low opportunity for thought, and greater when discounting was easier rather than harder.

## Method

### Participants

A total of 114 university students (83 females, 31 males, mean age = 25.9 years) enrolled in psychology classes at a mid-sized Southeastern university volunteered to participate in an experiment entitled “Judging Job Applicants.” Participants received extra credit in exchange for their participation. Informed consent forms were obtained before participation and all participants were treated according to the American Psychological Association ethical standards.

### Materials

Using Anderson’s (1968) trait likableness ratings, 33 positive traits (high in likability), and 33 negative traits (low in likability) were selected. Twenty-two “applicant files” were created by combining two consistent traits with an inconsistent trait. These trait sets acted as filler files to acclimate the participant to use the impression rating scale. Eleven trait sets contained one positive trait and two negative traits. Another eleven trait sets contained one negative trait and two positive traits. Each applicant file was printed on a hypothetical company’s letterhead. These files were designed to display an

applicant's number (generated by a random numbers table) and a listing of three references (identified as numbers 1, 2, and 3). Across from each reference, a trait was printed in capitals and in bold lettering. The three traits per file were ordered vertically with the inconsistent trait randomly inserted within the two consistent traits. The combinations of three traits were designed so that each positive file was equal in likability and each negative file was equal in dislikability.

In addition to these 22 filler files, eight target sets of traits were printed on applicant files. These trait sets were modified versions of the original trait sets from the Anderson and Jacobson (1965) study. The first four sets included two positive words followed by one negative word that was the semantic opposite of the preceding word. The four sets of traits were: considerate, honest, deceitful; artistic, careful, reckless; appreciative, cheerful, gloomy; and respectful, purposeful, aimless. Four additional sets of two negative words followed by a positive antonym of the second word were included. They were: close-minded, careless, dependable; unforgiving, impolite, courteous; conceited, insecure, self-confident; and stingy, boring, amusing.

Last, the AT-20 Scale originally developed by Rydell & Rosen (1966, as cited in MacDonald, 1970), but revised by MacDonald (1970), comprised the "thought process" questionnaire given to participants. This scale measures one's tolerance for ambiguity. It consisted of twenty true-or-false items. Answers were scored such that high scores indicate high intolerance for ambiguity. Participants were categorized as either having high tolerance for ambiguity or low tolerance for ambiguity by median-split procedures. MacDonald reported a test-retest reliability of .63 ( $p < .01$ ) for a six-month interval and an



internal consistency estimate of 0.86.

### Design

The proposed study was a 2 x 2 x 2 between subjects factorial design. The independent variables were instructional set (Instruction 1 or Instruction 2) and levels of opportunity for thought (15 or 60 sec). Opportunity for thought and condition type for each participant was determined by random assignment. In addition, a predictor variable of personality type (high or low tolerance of ambiguity) was included. The dependent variables were attitude change and discounting.

### Procedure

Participants were individually greeted and seated by the experimenter. They were told that they will be judging job applicants based on information from letters of recommendation. A cover story explaining the importance of letters of recommendation in the application process was used to motivate the participants. They were also told that they will complete a thought process scale that measures their cognitive style. Last, participants were told that their participation is completely voluntary, they can withdraw at any time without penalty, and that their name will not be associated with any part of the research. Informed consent forms were signed and dated, then placed in a secure location.

Participants were told that in order to judge the applicants, they will be using an impression scale. The experimenter then illustrated the use of a 15-point Likert scale with endpoints labeled +7 (extremely favorable impression) and -7 (extremely unfavorable impression), intermediate points labeled +4/-4 (moderate), and a midpoint of

0 (neutral). Hypothetical examples of positive and negative impressions were given. The impression scale was placed within full view throughout the experiment.

The experimenter shuffled the thirty applicant files to ensure randomization. Participants were told that they will be asked to role play the part of a personnel manager; the personnel department has sifted through all three letters per applicant and has summarized their qualities into one standard form. Participants read these descriptions and rated their initial impression according to the scale. They were given only a few seconds (approximately 10 seconds) to give their initial rating aloud. Participants were instructed to ask the experimenter to clarify any unclear words. Any questions were answered.

Each file was presented individually with the impression scale in full view. After each presentation, the ratings were recorded on a coding sheet. From the eight target files, one was randomly selected with a +4 rating (or +3 if there are no +4) and one was randomly selected with a -4 rating (or -3 if there are no -4 ratings). Participants were then given one of two instructional sets:

[Instruction 1] Imagine that three people have each written a letter of reference describing the job candidate. We summarized each letter of reference into one word. These people all know the candidate well, and each word is equally important in describing the job candidate.

Sometimes, of course, the three words may seem inconsistent. That's to be expected because each of the people might see a different part of the candidate's personality. However, all three words are accurate and each

word is equally important. You should pay equal attention to each of the three. Sometimes this may seem hard, but just act naturally and do the best you can (modified from Anderson & Jacobson, 1965).

[Instruction 2] Imagine that three people have each written a letter of reference describing the job candidate. We summarized each letter of reference into one word. These people all know the candidate well.

However, these people might not all be equally good judges of personality. Consequently, the three words might not be equally important aspects of the job candidate's personality. In order to decide what the candidate is really like, you might have to pay more attention to one word than another, at least in some cases. Sometimes this may seem hard, but just act naturally and do the best you can (modified from Anderson & Jacobson, 1965).

All the participants were then told:

There are a couple of persons that we are particularly interested in. I'd like you to take some time to think about one of these applicant files. I want you to concentrate all your thoughts on this applicant during the time I give you. You might want to think about how you feel about a person with these characteristics. Or you might want to think about what other qualities and traits people like this may have. Just concentrate on this description and continue thinking until I tell you to stop.

Participants were then shown one of two target files about which they were asked to

think. The order of the two description files (i.e., positive initial rating, followed by negative initial rating; negative initial rating, followed by positive initial rating) was counterbalanced between participants to equate order effects. The participant was given the target files to read for approximately five seconds. Then the file was removed from view. Each participant received the same duration of time for thought (15 sec or 60 sec) for both descriptions. When the allotted time for thought expires, participants were told:

Now that you've had some time to collect your thoughts, I'd like you to once again indicate how you feel. Sometimes people's feelings change even in a short period of time such as this. Of course, you may or may not feel the same way about this person. Using the scale like before, indicate how you feel now about the person.

Using the same impression scale as before, participants indicated their overall impression rating. Their second ratings were recorded on the coding sheet. The process was repeated for the second target file.

After the two re-ratings were complete, participants were asked to recall the three traits listed in the first applicant file about which they thought. In order to assist with this process, a participant was given an applicant file that contains blank lines where the traits were formally located. After writing in the remembered traits, the participants were asked to recall the second applicant file about which they thought. Participants were given another blank applicant file to complete.

After the two recall forms were completed, the participants were asked to complete a 20-item questionnaire. This included demographic information (age and sex)

and the AT-20 tolerance of ambiguity scale.

Finally, with the experiment concluded, the experimenter inquired of the participant what the intention of the study may be. The hypotheses and purpose of the experiment was explained. Participants were asked not to discuss the study with potential participants; they were thanked and dismissed.

### Dependent Measures

Attitude Change. Attitude change was scored using a trichotomous coding system. If initial attitudes became more polarized (i.e., if initially positive attitudes became more positive or initially negative attitudes became more negative), then attitude change was scored a +1. If the opposite occurred (initially positive attitudes became less positive or initially negative attitudes became less negative), then attitude change was scored a -1. If there was no change, attitude change was scored a 0. Scores were summed from the two target cards to give a range of -2 to +2 as an index of attitude change. The attitude scale here was designed to assess whether or not attitude change occurred rather than the magnitude of attitude change (see Tesser, 1978, for details on attitude change indices).

Discounting. A total discounting score was computed by summing the number of inconsistent traits recalled from each description so that each participant received a single discounting score. The lower the discounting score, the less evidence for discounting. The scores ranged from a 2 (participants recalled both inconsistent traits) to a 4 (participants did not recall either of the inconsistent traits). A participant who recalled both of the inconsistent traits in the two descriptions did not discount any traits. Note

that the higher the discounting score, the stronger evidence for discounting. That is, a participant who did not recall any traits expressed a strong tendency toward discounting.

## Results

### Attitude polarization

The main hypothesis of this research was that attitudes about persons should polarize as the opportunity for thought increased. A main effect for opportunity for thought was expected. It was also hypothesized that an instructional set that made discounting inconsistent information easier would increase attitude polarization whereas an instructional set that made discounting difficult would decrease attitude polarization. An interaction between opportunity for thought and instructional set was expected. Last, it was hypothesized that persons with low tolerance for ambiguity would experience attitude polarization when given ample opportunity for thought. In contrast, persons with high tolerance would experience less attitude polarization when given insufficient opportunity for thought. Moreover, persons with low tolerance for ambiguity would experience attitude polarization when discounting was easier. Persons with high tolerance for ambiguity would experience attitude polarization when discounting was difficult. An interaction between opportunity for thought, instructional set, and the personality variable of tolerance of ambiguity was expected.

A 2 (opportunity for thought) x 2 (instructional set) x 2 (personality type) ANOVA with attitude change as the dependent variable was conducted. As expected, there was a significant main effect for opportunity for thought,  $F(1, 106) = 4.70, p \leq 0.05$ . When the opportunity for thought was low, attitude polarization was less likely ( $M = -0.45, SD =$

1.09). When the opportunity for thought was high, attitude polarization was more likely ( $M = 0.03$ ,  $SD = 1.07$ ). However, none of the other main effects or interactions were significant, all  $F_s(1, 106) < 1$ ,  $p_s = ns$ . Although the results replicated previous research on self-generated attitude change, the additional hypotheses were not supported.

### Discounting

It was hypothesized that there would be less inconsistent trait recall when the opportunity for thought was high and more inconsistent trait recall when opportunity for thought was low. A main effect of opportunity for thought on inconsistent trait recall was expected. It was also hypothesized that an instructional set that made discounting inconsistent information easier would decrease trait recall whereas an instructional set that made discounting difficult would increase trait recall. An interaction between opportunity for thought and instructional set was expected. Last, it was hypothesized that persons with low tolerance for ambiguity would experience less trait recall when given ample opportunity for thought. In contrast, persons with high tolerance for ambiguity would experience more trait recall when given insufficient opportunity for thought. Further, persons with low tolerance for ambiguity would experience less inconsistent trait recall when discounting was easier. Persons with high tolerance for ambiguity would experience more inconsistent trait recall when discounting was difficult. An interaction between opportunity for thought, instructional set, and the personality variable of tolerance of ambiguity was expected.

A 2 (opportunity for thought) x 2 (instructional set) x 2 (personality type) ANOVA with trait recall as the dependent variable was conducted. However, none of the main

effects or interactions were significant, all  $F_s(1, 106) \leq 2.16$ ,  $p_s \leq 0.15$ . These results suggested that trait recall was not affected by varying levels of opportunity for thought, instructional sets, or tolerance of ambiguity.

### Discussion

The present study sought to identify the role of inconsistent belief discounting in self-generated attitude change. The theory of self-generated attitude change, developed by Tesser (1978), asserts that individuals hold beliefs about persons, objects, or events. One's attitude about persons, objects, and events depends on one's beliefs about those persons, objects, or events. With thought, the beliefs become more consistent and less ambivalent thus resulting in attitude polarization (i.e., feelings become less ambivalent and more extreme). The results reported in this study replicated prior research that demonstrated this relationship between attitude polarization and opportunity for thought.

Theoretically, one of the cognitive processes that mediates the relationship between attitude polarization and opportunity for thought is discounting inconsistent information. Unfortunately, the role that discounting plays in self-generated attitude change was not illuminated in this research. The results indicated that attitude polarization was not more likely when opportunity for thought was high and when discounting inconsistent information was easy. Moreover, this effect was not more likely for persons who are intolerant of ambiguous information than for persons who are tolerant of ambiguity. In addition, increased amount of thought did not result in less inconsistent trait recall. Inconsistent trait recall was not more likely when discounting was easier or when persons are intolerant of ambiguous information. Why were the hypotheses not supported?



### Possible Explanations

One explanation might have been that the instructional sets designed to make discounting inconsistent information easier or harder may not have been a strong enough manipulation to elicit discounting. The participants may have opted to ignore the instructional sets and decide for themselves how they were going to evaluate the inconsistent information. Instead, these instructions may have inadvertently prompted other kinds of thought processes. Specifically, attitude polarization may have been the result of the spontaneous generation of additional beliefs that were consistent with the subjects' first impressions. Alternatively, attitude polarization may have been the result of the reinterpretation of the inconsistent information to make it more consistent with the initial beliefs upon which subjects based their first impressions.

However, past research on impression formation (see Anderson & Jacobson, 1965) has found a small discounting event using the similar instructional sets. Speziani and Leone (1999) incorporated the instructional sets and found a small relationship between attitude polarization and thought. Future research should not abandon the use of these instructional sets. Perhaps some changes can be made to increase the impact the instructional sets have on attitude change.

It is also possible that the discounting effect did not occur because the descriptive traits and their semantic opposites produced two very divergent thoughts about a person. It may have forced participants to dismiss both pieces of incongruent information and focus on only the remaining descriptive trait. However, the traits used here were also used in past studies on discounting which found that individuals discounted inconsistent

traits in impression formation tasks (Anderson & Jacobson, 1965). Moreover, Speziani & Leone (1999) found that the use of instructional sets that make discounting easy in conjunction with increased thought resulted in attitude polarization.

The previous research on the microprocesses of reinterpretation of cognitions and generation of new beliefs used moderate time lengths (e.g., 90 seconds) for an effect on attitude polarization. Discounting may require longer periods of time because it may not be the most favored approach to evaluating inconsistencies. It may require longer thought times to evaluate the information and properly dismiss it from memory. However, a small discounting effect was reported using the same time lengths used in this investigation (Speziani & Leone, 1999).

Some other alternative explanations for the nonsignificant results include sample specific error. The vast majority of the sample included upperclassman students studying social psychology or personality theories. The exposure to advanced theories of psychology may have biased the sample to be unusually curious or suspicious about the expected results of the experiment. The participants may have been too preoccupied with the use of semantic opposites to focus on their impressions during thought. Moreover, the upperclassmen may have highly accurate memory skills so that the use of trait recall was not powerful enough to detect differences in the way individuals discount inconsistent information. However, other studies on self-generated attitude change used similar samples and found evidence of thought-induced attitude polarization (Speziani & Leone, 1999; see also Leone, 1989, 1994, 1996; Leone et al., 1991).

It was hypothesized that individuals with low tolerance for ambiguity would be

more likely to discount inconsistent information when the time provided for thought was longer rather than shorter. The results did not support this hypothesis. The scale developed by MacDonald (1970) is psychometrically sound, with good internal consistency and test-retest reliability. Moreover, there is some evidence linking intolerance of ambiguity and self-generated attitude change (Leone, personal communication, July 30, 1999).

### Future Directions

There are several possible explanations for the null results that can be eliminated, but some improvements can still be incorporated in future research. Inconsistent trait recall is one possible way of directly assessing discounting. Tesser (1978) speculated that discounting might be a function of poor memory retrieval. Moreover, the recall of attitude relevant evidence is improved when forming an impression (Fiske & Taylor, 1984). Hence, inconsistent traits may be discounted. Other investigations can utilize different ways of assessing discounting. A thought-listing task could assess the amount of weight or importance a person places on inconsistent traits.

Tolerance of ambiguity is only one personality factor that might moderate the relationship between attitude polarization and thought. Dogmatism, rigidity, and personal need for structure also accentuate the relationship between discounting and thought. Additional research is needed to determine what part, if any, personality plays in discounting inconsistent beliefs during self-generated attitude change. More importantly, the effect per se of discounting on self-generated attitude change should be

demonstrated. Further research needs to provide additional insight into the cognitive processes behind self-generated attitude change.

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AIDS Task Force of Winston-Salem, 1995-1997  
AIDS Care Team member, 1997  
Meals on Wheels Coordinator, 1996  
Best Choice Enrichment Center (a children's substance abuse  
prevention agency), 1995-1997  
Amos Cottage of Forsyth Memorial Hospital (pediatric long-term  
care division for special learning and developmental needs)  
1995-1997  
Special Olympics of Winston-Salem, 1996  
Family Services of Winston-Salem (a battered women's shelter),  
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**Community  
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Brenner's Children Hospital, 1995-1997  
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