Attitude Polarization and Need for Affect

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Abstract

Merely thinking about an attitude object has been repeatedly shown to result in a polarized attitude about that object. Individual differences in need for affect may moderate this polarization process. In this study, opportunity for thought and schema-type (group vs. individual) were manipulated. Need to seek out or avoid emotions were assessed using the Need for Affect Scale. Independent variables were opportunity for thought, group vs. individual schemas, and need for affect. Dependent variables were attitude polarization and belief consistency. We found no support for our hypotheses. Future directions may include investigation into other individual differences that may moderate attitude polarization.
Attitude Change and Need for Affect

On September 11, 2001, several groups of individuals hijacked four airplanes and successfully struck three of their four intended targets: The Pentagon, each of the two World Trade Towers, and the White House. It was suspected that these individuals were members of a militant Islamist terrorist group called Al Qaeda.

Before 9/11, most Americans had little experience with Al Qaeda and thus spent little time thinking about them. After 9/11, this group, about whom Americans now had a negative attitude, was at the forefront of many Americans’ minds. Americans thought about how their way of life was now threatened by Al Qaeda. Americans thought about people that died and about the pain and suffering of their families and friends. Americans thought about heroic firefighters who lost their lives trying to rescue victims. Further, Americans asked themselves about what kinds of people would be able to attack and kill innocent civilians? As Americans thought about Al Qaeda, feelings of fear, anger, and hatred intensified. Americans’ attitudes about Al Qaeda became increasingly negative which resulted in Americans supporting retaliation toward Al Qaeda and any nation harboring these individuals. What factors may have led to intensified feelings and changes in attitudes? What role might have thinking about Al Qaeda after 9/11 had in changing Americans’ feelings, beliefs, and attitudes about them?

The above example illustrates that merely thinking about an attitude object (person, place, thing, or idea) may cause attitudes to become more extreme or “polarized” (i.e., self-generated attitude change; see Tesser, 1978). In effort to learn more about the effects of mere thought on attitude polarization, Sadler & Tesser (1973) conducted a study in which participants were partnered with an individual to complete a simple task. Unbeknownst to participants, this “partner” was actually a recording of a confederate. Two recordings of this confederate, an
agreeable (i.e., friendly, warm, and complimentary), and a disagreeable (i.e., unfriendly, cold, and insulting) were used. Participants were randomly assigned to hear either agreeable or disagreeable recordings and were then asked to indicate their attitudes about their partner. Next, participants were randomly assigned to one of two conditions: time to think about their partner or distraction from thinking about their partner. Finally, participants were asked to once again indicate their attitudes about their partner. When given an opportunity to think, participants’ attitudes became more extreme. When distracted from thinking, participants’ attitudes changed little. Other researchers have found similar effects of thought on attitude extremity (e.g., Chaiken & Yates, 1985; Downing, Judd, & Brauer, 1992; Leone & Ensley, 1985; Liberman & Chaiken, 1989; Lord, Ross, & Lepper, 1979; Tesser & Conlee, 1975; Tesser & Leone, 1977).

With regard to self-generated attitude change, there are two macroprocesses involving interactions between thought, feelings, and beliefs (Tesser, 1978; Tesser et al., 1995). One macroprocess is a relationship between thought and beliefs (Eagley & Chaiken, 1998). During thought, there is a tendency for people to make their beliefs increasingly consistent with their initial attitudes (Tesser, 1978; Tesser et al., 1995). Consequently, this increased belief consistency has a bolstering effect on attitudes, and given a sufficient opportunity for thought, attitudes will polarize (Chaiken & Yates, 1985; Clary, Tesser, & Downing, 1978; Liberman & Chaiken, 1989; Sadler & Tesser, 1973; Tesser, 1976). An example of this macroprocess is development of motivation to vote for a political candidate. During a debate between two candidates, people form attitudes about each candidate. After a debate is over, people are left to think about each candidate. As people think, they tend to align their beliefs with their attitudes about each candidate which results in bolstered attitudes and motivation of voting behavior.
A second macroprocess is a relationship between beliefs and feelings (Chaiken & Eagley, 1998). Feelings that people have about an attitude object will be reflective of their beliefs about this object. For example, if people have unfavorable beliefs about Muslims (e.g., All Muslims are terrorists), these people will also have unfavorable feelings that coincide with their beliefs (e.g., We are afraid of Muslims).

During thought about an attitude object, there are three microprocesses involved in increasing evaluative consistency (Tesser, 1978). People may generate new beliefs which are consistent with their initial attitudes (Tesser & Cowan, 1975), discount beliefs which are inconsistent with their initial attitudes (Lord, Ross, & Lepper, 1979), and reinterpret ambiguous beliefs to make their beliefs more consistent with their initial attitudes (Tesser & Cowan, 1977). During thought, a person may engage in any one or a combination of these processes.

In effort to learn more about the effect that generating evaluatively-consistent beliefs has on polarizing attitudes, Tesser and Cowan (1975) conducted a study in which a manipulation the number of initial pieces of information (i.e., beliefs) that participants received about a hypothetical individual. During thought, participants with less initial beliefs generated more beliefs about this individual than those with more initial beliefs. As participants generated more beliefs, they had more polarized attitudes. To illustrate this process, if people are told that a person in a photograph is altruistic and willing to sacrifice his/her own life if it might save another’s life, they would likely have a positive attitude about this person. If asked to think of some other traits that this person might have (i.e., generate beliefs), people may indicate that he/she is probably also brave, selfless, and caring. As people generate additional attitude-consistent beliefs, their attitudes polarize. Other researchers have reported similar findings about this process (e.g., Chaiken & Eagly, 1983; Liberman & Chaiken, 1989).
In effort to learn more about the effect that discounting evaluatively-inconsistent beliefs has on attitude polarization, Lord, Ross, and Lepper (1979) conducted a study in which participants were either given beliefs that coincided with or opposed their initial impressions about capital punishment. These researchers found that when participants discounted beliefs which were inconsistent with their initial impressions they had more polarized attitudes than participants who did not discount inconsistent beliefs. To illustrate this microprocess, if told that a person in a photograph is heartless and willing to carelessly hurt others, people would have a negative attitude about this person. If asked to consider a belief that this person is also a blood donor, people would likely discount this belief as it is inconsistent with their initial attitude about this person (i.e., negative due to the fact that this individual is a terrorist). As people discount attitude-inconsistent beliefs, their attitudes polarize. Other researchers have reported that discounting inconsistent beliefs leads to polarized attitudes (e.g., Chaiken & Yates, 1985; Downing et al., 1992; Liberman & Chaiken, 1991; Pomerantz, Chaiken, & Tordesillas, 1995).

In effort to learn more about an effect that reinterpreting ambiguous beliefs has on attitude polarization, Tesser and Cowan (1977) manipulated whether participants received ambiguous or unambiguous beliefs about a hypothetical person. Participants who received ambiguous beliefs and reinterpreted their beliefs were more likely to indicate polarized attitudes than participants that received ambiguous beliefs and did not reinterpret their beliefs. To illustrate this microprocess, if told that a person in a photograph is a terrorist who has committed several acts of violence against humanity, people would have a negative attitude about this terrorist. If asked to consider a belief that this terrorist is a registered voter, people would likely reinterpret this ambiguous belief to be consistent with their initial attitude. As people reinterpret ambiguous beliefs to be more consistent with their initial attitudes, their attitudes polarize. Other
researchers have reported similar finding about the effects of reinterpreting beliefs on attitude polarization (e.g., Downing, Judd, & Brauer, 1992; FIND RESEARCHERS THAT FOUND EVIDENCE of THIS).

To summarize, there is a relationship between thought, beliefs, and feelings. Feelings that people have will be reflective of their beliefs. During thought, there is a tendency for people to change their beliefs to increase consistency with their initial attitudes by generating new attitude-consistent beliefs, discounting attitude-inconsistent beliefs, and reinterpreting ambiguous beliefs. As peoples’ beliefs become more consistent, their attitudes polarize.

A moderating process in self-generated attitude change is activating or “tuning-in” a naïve theory or “schema” (Tesser, 1978; Tesser et al., 1995). A schema is a learned structure of knowledge about an attitude object. People possess schemas for most things they may encounter in their environment. When people encounter an attitude object, they do not necessarily objectively view this object. Instead, through memory retrieval, they subjectively tune-in an appropriate schema about this object (Smith & Queller, 2001). An example of a schema is an ethnic stereotype.

During thought, a schema functions as a blueprint for processing information about an attitude object (Smith & Queller, 2001; Tesser, 1978; Tesser et al., 1995). Once a schema is tuned-in, thoughts are directed by that schema. If two people encounter an attitude object and each activates a different schema about that same object, during thought, each person would have different attitudes corresponding to their differing tuned in schema (Tesser & Danheiser, 1978). As time spent thinking about an attitude object is increased while under the direction of a schema, beliefs about that object will become increasingly evaluatively consistent and schema-like (Clary et al., 1978; Tesser & Danheiser, 1978). As beliefs about an attitude object become
more consistent with information contained in our schema, attitudes polarize (Tesser & Leone, 1977). If no schema is tuned in, beliefs and attitude change are likely to occur randomly (Tesser & Leone, 1977).

Self-generated attitude change is brought about by thinking about an attitude object under direction of a schema. Do all individuals have the same innate desire to spend time thinking about things in their environment? What individual differences moderate attitude polarization? Sadler and Tesser (1973) suggested that differences in attitude polarization may be due to individual differences in affective-cognitive processing styles. Will individual differences in motivation to approach or avoid using emotions moderate attitude polarization?

Need for affect is an individual difference in motivation to approach or avoid emotions and emotion-inducing stimuli (Maio & Esses, 2001). People high in need for affect are motivated to approach and are comfortable with emotions and emotion-inducing stimuli whereas people low in need for affect are motivated to avoid and are uncomfortable with emotions and emotion-inducing stimuli (Maio & Esses, 2001). When asked to list feelings about an emotion-inducing event, people high in need for affect are more likely to report a larger number of emotions than those low in need for affect (Maio & Esses, 2001). Additionally, individuals high in need for affect will be more adept at managing intense emotions than will those low in need for affect (Maio & Esses, 2001). An illustration of individual differences of high and low need for affect is a difference in emotional style between males and females. Females are more inclined to use emotions when forming impressions and making decisions, are more attracted to emotion-inducing stimuli, and are more skilled at managing their emotions than are males. Thus, females tend to be considered high in need for affect. Males are more inclined to avoid using emotions when forming impressions and making decisions, are less attracted to emotion-inducing stimuli,
and are less skilled in managing their emotions than are females. Thus, males tend to be considered low in need for affect. This stereotype does not apply to all males and females, though researchers have identified a sex difference (i.e., males are generally low and females are generally high) in need for affect (Leone & Presaghi, 2007; Maio & Esses, 2001).

How might peoples’ need for affect be related to self-generated attitude change? People high in need for affect are likely to possess and tune in affectively-oriented schemas. During thought, these peoples’ affectively-oriented schemas will guide generating, discounting, and reinterpreting of beliefs to produce attitudes that have pronounced affect. As mentioned earlier, feelings are related to beliefs. An affectively-laden evaluatively-consistent set of beliefs would be attractive to a person high in need for affect. Conversely, people low in need for affect are likely to lack affectively-oriented schemas. During thought, these peoples’ non-affectively-oriented schemas will guide generating, discounting, and reinterpreting of beliefs to produce attitudes that have diminished affect. An affectively-laden evaluatively-consistent set of beliefs would be unattractive to a person low in need for affect.

How might individual differences in need for affect impact schema use? Due to their motivation and ability to use emotions, people high in need for affect are likely to possess and use more complex schemas when encountering affectively-oriented stimuli than will people low in need for affect (Ric, 2004). Conversely, due to their motivation to avoid and lack of ability to use emotions, people low in need for affect are likely to possess and use simple schemas when encountering affectively-oriented stimuli than will people high in need for affect (Ric, 2004).

How might individual differences in need for affect impact self-persuasion? Individuals high in need for affect are more likely to be persuaded by affectively-laden messages than are those low in need for affect (Haddock, Maio, Arnold, & Huskinson, 2008). Furthermore, people
high in need for affect are less likely to be persuaded by cognitively-laden messages than are those high in need for cognition (Haddock et al., 2008). To summarize, when people’s attitudes are more affective than cognitive in nature, they are more likely to be persuaded by emotional rather than rational messages (Huskinson & Haddock, 2004; Seitz, Lord, & Taylor, 2007).

Consistent with prior research, we predict that increases in opportunity for thought will be related to increases in attitude polarization and belief consistency. We also predict that individuals high in need for affect will have more polarized attitudes and more consistent beliefs than individuals low in need for affect when given increased opportunity for thought. Our third hypothesis is that increases in opportunity for thought will be related to increases in attitude polarization and belief consistency when participants are thinking about individuals rather than groups. Our fourth hypothesis is that increases in opportunity for thought will be related to increases in attitude polarization and belief consistency when participants tune in schemas that are consistent with their initial impressions; increases in opportunity for thought will be related to increases in attitude attenuation and decreases in belief consistency when participants tune in schemas that are inconsistent with their initial impressions. Our fifth hypothesis is that there will be interactions between participants’ opportunity for thought, need for affect, thought about individuals or groups, and consistency (or inconsistency) of schema with initial impression.

Method

Participants

A total of 101 undergraduate students were recruited from various psychology courses at a large suburban university. Students agreed to participate in a study titled “Individual
Differences in Perceptions of Other People.” Extra credit toward their course grade was awarded for participating in this study.

More females (n=75) than males (n=26) participated in this study. The majority (67.33%) of this sample were 18 to 22 years old. Of this sample, 60% identified themselves as Caucasian/White, 23% identified themselves as African American/Black, 5% identified themselves as Hispanic/ Latino, 9% identified themselves as Asian/ Pacific Islander, and 3% identified themselves as Other in terms of race/ethnicity. Of this sample, 38% identified themselves as Democrat, 30% identified themselves as Independent, and 33% identified themselves as Republican.

A male experimenter randomly assigned participants to experimental groups. He obtained a signed, written informed consent from all participants. Due to the nature of this study (i.e., assessing attitude polarization), data from one participant were excluded because this participant’s initial attitude responses were extreme (e.g., +7, -7). All participants were treated in accordance with the “Ethical Principles of Psychologists and Code of Conduct” (American Psychological Association, 2003).

Procedure

Participants were scheduled individually for one hour periods in a research laboratory. A male experimenter greeted participants and asked them to be seated at a table inside a lab. He described the general purpose of this study (i.e., studying differences in college students’ impressions of other people) and the procedure of this study (i.e., forming impressions, describing thought processes, and describing themselves). Next, he informed participants that they could answer honestly as their responses were confidential, that they wouldn’t be
He then obtained verbal and written consent from participants. He informed participants that the first portion of this study would involve forming impressions of other people. Participants were randomly assigned to one of two conditions. Participants in one condition were told they would see descriptions of individuals whereas participants in another condition were told they would see descriptions of groups. He presented an example descriptor card that was similar to descriptor cards used in this study. Four separate attributes were listed on this example descriptor card (e.g., optimistic, courteous, headstrong, and honest). The attributes listed on this example card, as well as on each descriptor card in this study, had been selected from Norman Anderson’s (1968) 555 personality trait words rating likeableness.

Next, he told participants they were to indicate their impression of an individual/group described on this card. He placed on a table in front of participants a 15-point scale with endpoints labeled strongly favorable (+7) and strongly unfavorable (-7), intermediate points labeled moderately favorable (+4) and moderately unfavorable (-4), and a midpoint labeled neutral (0). Next, he informed participants that they were to select a number on this scale to indicate their impressions of an individual/group described in this card. Once participants selected a number on this scale, he informed them that they would be shown a series of similar descriptor cards and asked if they understood the procedure and if they had any questions.

Next, he briefly showed participants a series of 30 7.62 cm. x 12.7 cm cards. On one side of each card, visible to participants, was a set of four attributes (e.g., talented, independent, humorous, and unconventional). Fifteen cards contained three positive attributes and one neutral (e.g., imaginative, loyal, skilled, and inhibited) and fifteen cards contained three negative
attributes and one neutral (e.g., authoritative, unintelligent, resentful, and mediocre). On the opposite side of each card, visible to him, was a number (1-30) used to record responses on a separate sheet of paper. Participants were asked to indicate their responses aloud using the aforementioned 15-point scale. He wrote participants’ responses on a numbered (1-30) sheet of paper. Once all 30 responses were obtained, he identified two cards for which participants indicated moderately favorable impressions (+4) and two cards for which participants indicated moderately unfavorable impressions (-4). If there were no such impressions, he then selected two cards for which participants indicated relatively moderately favorable impressions (+5, then +3) and/or two cards for which participants indicated relatively moderately unfavorable impressions (-5, then -3).

After he selected four cards for which participants had indicated moderately favorable or moderately unfavorable impressions, he informed participants (depending upon an experimental condition to which participants were assigned) that sets of attributes listed on these cards were actually of a “freedom fighter” or a “group of freedom fighters.” He gave a brief description and examples of a “freedom fighter” (e.g., someone who fights for the freedom of others, an example of whom might be American soldiers fighting in Iraq and Afghanistan). The order in which participants were shown descriptions they rated favorably and descriptions they rated unfavorably was counterbalanced across other conditions in this study.

Before he briefly showed participants one of the four cards selected, he used a modified script from an earlier study (Leone, 1996) and said

I’d like you to take some time to think about this freedom fighter/group of freedom fighters. I want you to concentrate all of your thoughts on this freedom fighter/group of freedom fighters during the time I give you. You might want to think about how you feel
about this freedom fighter/group of freedom fighters. You might want to think about a
described in the first card, he randomly assigned participants to one of two opportunities for
thought (60 seconds or 180 seconds) and told participants

Before participants began to think about a freedom fighter/group of freedom fighters
While you think about this freedom fighter/group of freedom fighters, I’d like for you to
list your thoughts on a sheet of paper. Grammar and punctuation are not important. Please
list only one thought per line. For example: If we were referring to a group called
‘Walonians’, possible responses might be ‘friendly’, ‘I like them’, or ‘evil.’ ‘They are
friendly and I like them’ for the purpose of this exercise is two thoughts and should be

After ensuring that participants understood this belief listing task, he briefly showed them one of
the four cards he selected, took the card back from participants, and instructed them to begin
thinking and writing. Once participants finished thinking and writing, he asked them to indicate
whether they felt each of their beliefs about this freedom fighter/group of freedom fighters was
positive, negative, or neutral by placing corresponding symbols (e.g., +, -, 0) next to each belief
listed. He created a score of belief consistency by dividing the number of valence-consistent (i.e.,
positive beliefs for positive impressions and negative beliefs for negative impressions) by the
total number of beliefs listed. An overall belief consistency score was created by adding
proportions of consistent beliefs across all 4 descriptions. Next, he used a modified script from an earlier study (Leone, 1996) and said to participants:

Now that you have had a chance to collect your thoughts, I’d like you to once again indicate how you feel. Sometimes people’s feelings change even over as short a period of time as this. Of course, you may or may not feel the same way about this freedom fighter/group of freedom fighters. Using the scale like before, indicate how you feel about this freedom fighter/group of freedom fighters now.

He noted participants’ new impression responses alongside their initial impression responses. To measure attitude polarization for initially favorable impressions, he assigned $+1$ to each impression that became more positive, $-1$ to each impression that became more negative, and 0 if no change in impression occurred. To measure attitude polarization for initially unfavorable impressions, he assigned $+1$ to each impression that became more negative, $-1$ to each impression that became more positive, and 0 if no change in impression occurred. An overall attitude polarization score was created by summing four assigned scores. This process was repeated for the remaining three cards.

Participants then completed the Need for Affect Scale (Maio & Esses, 2001). Participants made responses to this 26 item questionnaire using a 5-point Likert scale with endpoints labeled strongly disagree (A) and strongly agree (E), and a midpoint labeled neutral (C). Thirteen items in this questionnaire were worded to assess motivation to approach emotions (e.g., “It is important for me to be in touch with my feelings” and “Strong emotions are generally beneficial”). Thirteen items were worded to assess motivation to avoid emotions (e.g., “I do not know how to handle my emotions, so I avoid them” and “I wish I could feel less emotion”).
Responses were individually assigned a score of +1 for emotion approach and -1 for emotion avoidance. An overall need for affect score was calculated by summing scores for responses to emotion approach items and emotion avoidance items. Based on a median split of the full range of these scores, participants were then classified as either high or low in need for affect.

There is evidence of reliability for scores on the Need for Affect Scale. Researchers have reported internal consistency coefficients of at least .83 for scores on emotion approach and emotion avoidance, a statistically significant negative correlation ($r = -.36$) between scores on these two scales, and test-retest correlations of at least .74 (Leone & Presaghi, 2007; Maio & Esses, 2001; See, Petty, & Fabrigar, 2008). In this study, we found an internal consistency coefficient of .60 for this measure.

There is evidence of convergent validity for scores on emotion approach and scores on emotion avoidance. Researchers (e.g., Leone & Presaghi, 2008; Maio & Esses, 2001) have reported positive correlations for scores on emotion approach and affect intensity (e.g., Larsen & Diener, 1987), affective orientation (e.g., Booth-Butterfield & Booth-Butterfield, 1990), positive and negative-focused cognitive emotion regulation (e.g., Garnefsky, Kraaij, & Spinhoven), emotional expressiveness (e.g., King & Emmons, 1990) and positive affectivity (e.g., Watson, Clark, & Tellegen, 1988) as well as negative correlations for alexithymia (Taylor, Ryan, & Bagby, 1985), negative affectivity (e.g., Watson et al., 1988) and cognitive need for closure (e.g., Kruglanski, 1990). Researchers have reported positive correlations for scores on emotion avoidance and negative affectivity (e.g., Watson et al., 1988), ambivalence toward emotional expressiveness (e.g., King & Emmons,
1990), alexithymia (e.g., Taylor et al., 1985), and personal need for structure (e.g., Thompson, Naccarato & Parker, 1989) as well as negative correlations with affective orientation (e.g., Booth-Butterfield & Booth-Butterfield, 1990), positive affectivity (e.g., Watson et al., 1988), and individual differences in behavioral activation (e.g., fun and sensation seeking; Carver & White, 1994).

There is evidence for divergent validity for scores on need for affect scales. Researchers have reported low correlations for scores on need for affect scales and repression-sensitization (e.g., Cacioppo, Petty, & Kao, 1984), need for cognition (e.g., Carver & White, 1994), social desirability (Crowne & Marlowe, 1964), and age differences (e.g., Leone & Presaghi, 2007).

There is evidence of construct validity for scores on the Need for Affect scales. Researchers found that individuals that regularly attend performing arts events are likely to be high in need for affect (e.g., Hume, Mort, & Winzar, 2007), individuals high in conservatism are typically low in need for affect (e.g., Leone & Chirumbolo, 2008) and need for affect can be used to help measure relationships of attitudes to behavior (e.g., Seitz, Lord, & Taylor 2007).

Four questions were included at the end of this survey to obtain participants’ demographic information. Participants indicated their age (i.e., 18-22, 23-27, 28-32, 33-37, 38 or older), race (i.e., Caucasian/White, African American/Black, Hispanic, Asian, or Other), sex (i.e., Male, Female) and political affiliation (i.e., Democratic, Independent, Republican). To assess potential pre-experiment knowledge about this study, when participants completed this portion of the survey, he then asked them a series of questions (e.g., “What did you think we were looking at in this study?”). He then explained to participants the nature of this study,
illustrated their contribution to research and answered questions which may have arisen. Finally, he thanked them for their participation and escorted them out of the laboratory.

Results

Preliminary Analyses

In this study there were some potential issues which may have confounded our results. We obtained a smaller sample size (n=101) than was desired (n=160). We feel that this reduced size may contribute to our lack of finding statistically significant results. To remedy this, we will continue to gather data and re-analyze when a more sufficient sample size is obtained. Many of our participants were undergraduate psychology students. There was a potential that these students may have been exposed to what we were studying. As a manipulation check, once participants completed this study, we asked them if any questions on our survey seemed familiar to them. Fortunately, all participants were unfamiliar with questions in our survey. Part of this study involved having participants think about a specific target (i.e., an individual or a group of freedom fighters). We could not directly monitor what participants were thinking though we attempted to control for this issue by having participants list their thoughts.

Main Analyses

It was hypothesized that participants assigned to a 180 second thought condition would have more polarized attitudes and more consistent beliefs than participants randomly assigned to a 60 second thought condition. A main effect for opportunity for thought was expected. It was also hypothesized that participants would have more polarized attitudes when thinking about an individual freedom fighter rather than a group of freedom fighters. A two-way interaction was expected between opportunity for thought and schema-type. It was also hypothesized that participants would have more polarized attitudes when tuning in schemas that were consistent
with their initial impressions (i.e., affect) rather than inconsistent with their initial impressions. It was hypothesized that participants would have more attenuated attitudes when tuning in schemas that were inconsistent with their initial impressions rather than consistent with their initial impressions. A two-way interaction was expected for opportunity for thought schema-initial impression consistency. Finally, it was hypothesized that participants high in need for affect would have more polarized attitudes than participants low in need for affect. A two-way interaction was expected between opportunity for thought and need for affect.

This study was a 2 (opportunity for thought: 60 seconds vs. 180 seconds) x 2 (schema type: individual freedom fighter vs. group of freedom fighters) x 2 (need for affect: low vs. high) x 2 (initial attitude: moderately positive vs. moderately negative) factorial design with repeated measures on the initial attitude factor. A within-subjects variable in this study was initial attitude. The dependent variables in this study were attitude polarization and belief consistency. To evaluate our hypotheses, we conducted a 2 (opportunity for thought) x 2 (schema type) x 2 (need for affect) x 2 (initial attitude) analysis of variance (ANOVA).

Although our results weren’t statistically significant, we found limited support for our hypotheses regarding attitude polarization and belief consistency. There was not a significant main effect of opportunity for thought on attitude polarization $F(1, 93) = 2.00$, $p<.16$ or belief consistency $F(1,93)= 2.53$, $p<.11$. With regard to attitude polarization, participants did not show significant differences when given low opportunity for thought ($M = 0.69$, $SD = 1.97$) rather than high opportunity for thought ($M = 1.28$, $SD = 1.82$). With regard to belief consistency, participants did not show significant differences when given a low opportunity for thought ($M = 2.68$, $SD = 0.74$) rather than a high opportunity for thought ($M = 2.89$, $SD = 0.61$). We did not find support for our hypothesis regarding a two-way interaction between condition (i.e.,
opportunity for thought) and target (i.e., whether participants thought about an individual or a group) $F<1.00$. Participants did not show significant differences when given an increased opportunity for thought and thinking about an individual freedom fighter rather than a group of freedom fighters (see Table 1). We did not find support for our hypothesis regarding a two-way interaction between condition (i.e., opportunity for thought) and initial affect (i.e., schema-initial impression consistency) $F<1.00$. Participants did not show significant differences when given an increased opportunity for thought, when their initial impressions were positive rather than negative, and when thinking about freedom fighters (see Table 2). Finally, we did not find support for our hypothesis regarding a two-way interaction between condition (i.e., opportunity for thought) and Need for Affect (i.e., individual differences in need for affect) $F(1,93) = 1.22$, $p<.27$. Participants did not show significant differences when given an increased opportunity for thought and whether they were low or high in need for affect (see Table 3).

**Table 1:** Attitude polarization (i.e., total change): Condition (i.e., opportunity for thought) x Target (i.e., thought about an individual freedom fighter vs. group of freedom fighters):

<table>
<thead>
<tr>
<th>Condition</th>
<th>Target</th>
<th>Initial</th>
<th>Affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Individual</td>
<td>M= 0.23 SD= 1.99</td>
<td>M= 1.16 SD= 1.89</td>
</tr>
<tr>
<td>High</td>
<td>Groups</td>
<td>M= 1.20 SD= 1.71</td>
<td>M= 1.36 SD= 1.96</td>
</tr>
</tbody>
</table>

**Table 2:** Attitude polarization (i.e., total change): Condition (i.e., increased opportunity for thought) x Initial Affect (i.e., initially positive or initially negative ratings) when thinking about freedom fighters:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Initial</th>
<th>Affect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>Positive</td>
<td>M= 0.78 SD= 1.25</td>
</tr>
<tr>
<td>High</td>
<td>Negative</td>
<td>M= 0.96 SD= 1.14</td>
</tr>
</tbody>
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Table 3. Attitude polarization (i.e., total change): Condition (i.e., opportunity for thought) x Need for Affect (i.e., low or high need for affect):

<table>
<thead>
<tr>
<th>Condition</th>
<th>Need for Affect</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>M= 0.50 SD= 2.05</td>
<td>M= 0.95 SD= 1.88</td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>M= 1.71 SD= 1.87</td>
<td>M= 0.97 SD= 1.74</td>
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</table>

Discussion

In 1973, Sadler and Tesser conducted a study to examine the impact of mere thought on attitude change. Since then, several studies have been conducted to replicate this work and to learn more about this process (see Tesser, 1978 & Tesser et al., 1995 for review). More recently, researchers have studied how individual personality differences (e.g., cognitive need for closure, dogmatism, personal fear of invalidity) moderate thought-induced attitude polarization (i.e., self-generated attitude change). We were interested in learning if there is a moderating effect of need for affect on attitude polarization.

In this study, we had several hypotheses. First, we hypothesized that participants assigned to a 180 second thought condition would have more polarized attitudes and increased belief consistency after thought than participants assigned to a 60 second thought condition. Second, we hypothesized that when given an increased opportunity for thought, participants assigned to think about individuals would have more polarized attitudes than participants assigned to think about groups. Third, we hypothesized that when given an increased opportunity for thought, if participants tuned in schemas that were consistent their initial impressions, during thought, they would have more polarized attitudes than if they tuned in schemas that were inconsistent with their initial impressions. Conversely, when given an increased opportunity for thought, if participants tuned in schemas that were inconsistent with their initial impressions, they would have more attenuated attitudes than if they tuned in schemas that were consistent with their
initial impressions. Finally, we hypothesized that when given an increased opportunity for thought, participants high in need for affect would have more polarized attitudes than participants low in need for affect. We did not find sufficient evidence to support any of our hypotheses.

In this study, we did not find sufficient evidence to support a relationship between increased opportunity for thought, attitude polarization, and belief consistency. Participants were randomly assigned to one of two thought conditions (i.e., 60 or 180 seconds). We hypothesized that participants assigned to a 180 second thought condition would have more polarized attitudes and more consistent beliefs after thought than participants assigned to a 60 second thought condition. We also expected to find a consistent effect of increased opportunity for thought across other variables in this study. With regard to attitude polarization and belief consistency, we found no significant difference between these two thought conditions.

We did not find sufficient evidence to support a relationship between whether participants thought about an individual or group and attitude polarization. Participants were randomly assigned to think about one of two schema conditions (i.e., an individual freedom fighter or a group of freedom fighters). We hypothesized that when given an increased opportunity for thought, participants assigned to think about an individual freedom fighter would have more polarized attitudes than participants assigned to think about a group of freedom fighters. With regard to attitude polarization, we found no significant difference between these two schema conditions.

We did not find sufficient evidence to support a relationship between whether participants tuned in schemas that were consistent with their initial impressions or inconsistent with their initial impressions and attitude polarization. An experimenter showed participants four
descriptions which they had previously indicated moderately favorable or moderately unfavorable impressions and told them that these descriptions were either of a freedom fighter or of a group of freedom fighters (depending upon conditions to which participants were assigned). We hypothesized that when given an increased opportunity for thought, if participants’ initial impressions were moderately favorable and they thought about freedom fighters, they would have more polarized attitudes than if their initial impressions were moderately unfavorable and they thought about freedom fighters. Conversely, we hypothesized that when given an increased opportunity for thought, if participants’ initial impressions were moderately unfavorable and they thought about freedom fighters, they would have more attenuated attitudes than if their initial impressions were moderately favorable and they thought about freedom fighters. With regard to attitude polarization, we found no significant difference between whether participants had initially favorable or unfavorable impressions when thinking about freedom fighters.

We did not find sufficient evidence to support a relationship between individual differences in need for affect and attitude polarization. We hypothesized that when given an increased opportunity for thought, participants high in need for affect would have more polarized attitudes than participants low in need for affect. With regard to attitude polarization, we found no significant difference between individual differences in need for affect.

Our lack of finding sufficient evidence to support our hypotheses may be attributed to limitations in our study. First, we failed to obtain a sufficient sample size to enable our variables to reach statistical significance. Second, we used a quantitative measure for determining participants’ attitudes rather than a qualitative measure. In other words, participants’ attitudes may have changed after thought though we didn’t detect this change because of our method of measurement. Third, during this study, participants were re-shown descriptions which may have
induced practice effects. Finally, our method of obtaining data (i.e., self-report) is associated with a socially and internally desirable responding. In other words, participants may have been responding in ways that they felt were appropriate more than in ways which were genuine.

A major variable that may have impacted our results involves our attempt to activate schemas in participants. In this study, we used a “freedom fighter” prime to activate a positive schema in participants. Past researchers have found that differences in schema development impacts attitude polarization (Tesser & Leone, 1977). With this in mind, it is possible that many participants had poorly developed schemas for “freedom fighters.” Further, for those participants with well-developed schemas, there may have been a good deal subjective interpretation among participants with regard to impressions of “freedom fighters.” A reason for this is our sample was drawn from a city (Jacksonville, FL) in which there are multiple large military installations (i.e., many participants were active duty military, reservists, or friends or family of military members). To further confound this issue our nation is currently at war (i.e., people may have mixed emotions about freedom fighters). We did not attempt to measure schema development or subjective interpretation with this notion of “freedom fighter.”

To minimize confounds related to our sample, future researchers may benefit from obtaining a larger sample from a more diverse population. To adequately assess attitude change, future researchers may also use multiple methods for measuring attitude change. To remedy issues with schema activation, future researchers may attempt to activate schemas for which participants have clearly defined schemas (i.e., nurse, teacher, pastor). To rule out subjective interpretations, future researchers may give participants standardized descriptions to read which depict a person/group of people they are to think about and write about. To ensure comprehension and activation of schemas, participants may then be asked questions about these
descriptions. Our intent with using “freedom fighter” prime was to activate a mental representation (i.e., schema) within participants of a person/people that are intrinsically good. As part of a post-experiment interview, an experimenter asked participants to list some common occupations which are associated with people that are intrinsically good. Participants’ most common responses were “pediatrician,” “teacher,” “firefighter”, and “nurse.” Future researchers may use this knowledge to help activate schemas associated with people that are intrinsically good.

Study of effects of mere thought on attitude change is worthwhile. Peoples’ attitudes play a crucial role in determining their behavior. Effects of human behavior may be seen throughout our social world. Learning more about how we form attitudes helps to advance not only the study of human behavior but virtually all areas of human interaction.
References


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