BEHIND THE STAGE OF DELIBERATE SELF-PERSUASION:

WHEN CHANGES IN SPONTANEOUS ASSOCIATIONS TO AN ATTITUDE OBJECT

LEAD TO ATTITUDE CHANGE

by

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Behind the Stage of Deliberate Self-Persuasion: When Changes in Spontaneous

Associations to an Attitude Object Lead to Attitude Change

People often desire to change their attitudes. A more positive attitude toward one's romantic partner improves relationship satisfaction (Banse & Kowalick, 2007); a more positive attitude toward one's job improves productivity (Fleishman, 1965); a more positive attitude toward seeking professional counseling improves adjustment (Whiston, & Rahardja, 2008); a more negative attitude toward self-detrimental behaviors, such as dangerous driving habits, might even save lives (Tilleczek, 2011).

Recent research and theoretical advances suggest that people can achieve more desirable attitudes entirely on their own — that they are capable of persuading themselves without outside intervention, additional information, or even taking any action other than thinking their way into a new attitude. A comprehensive review by Maio and Thomas (2007) identified two ways in which people effectively change their own attitudes through deliberate self-persuasion. Because evaluative responses depend in part on the valence of activated associations to an attitude object (Ajzen & Sexton, 1999; Lord & Lepper, 1999; Schwarz, Strack, & Mai, 1991), one type of strategies (epistemic) is to change how positively or negatively the activated associations are viewed, thus changing their evaluative implications. The other type of strategies (teleologic) is to keep undesired associations from being activated in the first place, so that there is no need to change their perceived valence. It stands to reason, then, that change in perceived valence of activated associations might predict attitude change better when people use epistemic than teleologic strategies for deliberate self-persuasion.

Evaluative Processes and Attitude Change

People's own thoughts play an important role in major theories of attitude change (Lord & Lepper, 1999; McGuire & McGuire, 1991; Zanna & Rempel, 2008). Whether they are role-playing (Janis & King, 1954) or reacting to persuasive arguments (Petty & Cacioppo, 1986), the thoughts that people generate on their own take precedence (Brinol & Petty, 2003) in creating new attitudes. The process of deliberate self-persuasion is no exception. When people think about an attitude object, they tend to activate cognitive associations. A person's spouse might activate associations like "jealous" and "possessive," a minority group might activate associations like "hostile" and "untrustworthy," or a counseling center might activate associations like "worthless" and "embarrassed to go." A specific attitude object is likely to trigger only a handful of all possible associations on any one occasion (Bellezza, 1984; Schwarz & Bless, 1992; Wilson & Hodges, 1992), and the specific associations that are activated by an attitude object at any given time can be different from the handful that are activated by that same attitude object at a later time (Sia, Lord, Blessum, Ratcliff, & Lepper, 1997). Because an evaluative response to the attitude object depends, in part, on the perceived valence of the specific associations activated on that particular occasion, evaluative responses to the attitude object can vary from one time to the next (Lord, Paulson, Sia, Thomas, & Lepper, 2004). This brief summary of evaluative processes suggests two primary ways in which attitudes change.

Attitudes might change because of differences in how positively or negatively the activated associations are viewed. Even if exactly the same associations get activated from one time to the next, the perceived implications of those associations for an

evaluative response will be different if the associations can be made to take on a different subjective valence (Asch & Zukier, 1984; Plaks, Shafer, & Shoda, 2003). For instance, a woman may be reminded every time she evaluates her spouse of his intense jealousy, and yet she will evaluate him more positively if she begins to perceive jealousy as an admirable trait (e.g., an indicator of how much her spouse cares).

Attitudes might also change because of differences in which associations get activated. Even if a particular association continues to have just as positive or negative implications for an evaluative response, it will have no effect on the evaluative response if it does not get activated at that particular point in time. A woman's attitude toward her spouse can change even though she continues to perceive jealousy as a negative trait, if she no longer associates jealousy with him. Research has shown that, although it is often difficult to keep unwanted constructs out of active awareness (Wegner, 1989), ordinary people are capable of mastering this feat of mental gymnastics (Wenzlaff & Wegner, 2000). They can train themselves to avoid activating undesired associations (Wegner, 1994).

Deliberate Self-Persuasion

Interestingly, research on deliberate self-persuasion has identified two types of strategies that correspond with the two steps of the basic evaluation process. Maio and Thomas (2007) reviewed how people deliberately adopt new, more desired attitudes on many topics (e.g., self, close relationships, painful stimuli, delay of gratification, social groups). Based on their review, they proposed two categories of self-persuasion strategies: epistemic and teleologic. Epistemic strategies aim to change the valence of undesired associations, whereas teleologic strategies aim to change their likelihood of activation.

Table 1. Descriptions of epistemic and teleologic strategies and examples where attitudes toward "my life" are changed by applying the strategies to the thought "my life is boring."

Categories	Strategies	Description	Example
Epistemic	Motivated Interpretation	Reinterpret undesired attributes into more desired attributes	"Boring" means that you know what to expect
	Motivated Integration	Reintegrate undesired attributes with desired attributes	A "boring" life is also a safe life
	Motivated Attribution	Reattribute undesired attributes to benign causal factors	Moving to a small town would make anyone bored at first
	Motivated Hypothesis Testing	Retest the validity of undesired attributes	Not really boring, because I have something to do every evening
	Changing Comparators	Change the comparators for evaluating the attitude object	My life is not as boring as my parents', who never go anywhere
	Changing Dimensions	Change the dimensions on which the comparison is based	My life is highly productive, which is a more important dimension than boredom
Teleologic	Suppression	Monitor to keep undesired elements out of awareness	Try not to think about how boring my life is
	Distraction	Operate to keep undesired elements out of awareness	Think instead about what I have to do this afternoon
	Concentration	Operate to keep desired elements in awareness	Think instead about how rewarding it feels when I'm productive
	Preemption	Monitor to keep desired elements in awareness	Don't let thoughts of boredom intrude on more positive thoughts

Of the 10 self-persuasion strategies reviewed by Maio and Thomas (2007), six were epistemic and four were teleologic (See Table 1). When using epistemic strategies, a person re-constructs and re-interprets unwanted thoughts to make them consistent with the desired attitude. When using teleologic strategies, a person keeps thoughts that are inconsistent with the desired attitude out of mind, concentrating only on propositions that are consistent with the desired attitude. For example, a woman who is annoyed by her spouse being jealous might improve her attitude toward her spouse by re-interpreting her spouse's behavior — "he is jealous because he cares about me," which is an epistemic strategy (Motivated Attribution), or by keeping the idea "he is jealous" out of her mind, which is a teleologic strategy (Suppression).

According to Maio and Thomas (2007), people switch between the two types of self-persuasion strategies depending on the external context and the cognitive resources available. Recent research suggests that although the two types of strategies are equally successful in changing a person's attitude, people have a preference in the type of self-persuasion strategies they commonly use. A self-report instrument called the E-T Scale was developed to measure this individual difference (Taylor, Lord, Morin, Brady, Yoke, & Lu, under review), with a separate subscale for each strategy described in Table 1. Sample E-T Scale questions for epistemic strategies include "I would recognize that things I initially viewed as weaknesses about X are really a part of what makes X unique," (Motivated Interpretation) "I would think that X has some undesirable characteristics, but those are tied to many desirable characteristics," (Motivated Integration) "I would judge X based on circumstances surrounding X and not necessarily blame X entirely,"

(Motivated Attribution) "I would ask questions that would validate a positive opinion of X," (Motivated Hypothesis Testing) "I would realize that X is actually pretty good compared to the average group," (Changing Comparators) and "I would remind myself that X is desirable in all the ways that really matter." (Changing Dimensions) Sample E-T Scale questions for teleologic strategies include "I would try to avoid ever contemplating any negative thoughts about X," (Suppression) "I would engage my mind in another activity each time I remembered a negative quality of X," (Distraction) "I would concentrate on the positive qualities of X so that I don't think about the negative ones," (Concentration) and "I would not allow myself even to start wrestling with negative thoughts about X." (Preemption) When the scale is applied, Xs are replaced with the attitude object in question.

The E-T scale displays satisfactory internal and test-retest reliability (Cronbach's α's > .84), discriminant validity from other published scales (e.g., Big Five Inventory, Need for Cognition and Constructive Thinking Inventory), and construct validity by predicting differences in memory for undesired associations. In one study, for instance, Taylor et al. (under review, Study 4) gave all participants the E-T Scale. In a seemingly unrelated context approximately 1 month later, the researchers asked the same participants to list five negative thoughts that they associated with "going to the counseling center," and then asked them to sit quietly and mentally make their attitudes more positive toward going to the counseling center. After this session of deliberate self-persuasion, all participants were given an unexpected memory test for their original five negative associations. Consistent with the idea that epistemic strategies involve

focusing on undesired associations whereas teleologic strategies involve avoiding undesired associations, participants who had endorsed relatively epistemic strategies on the E-T Scale remembered the five negative thoughts significantly better than did participants who had endorsed relatively teleologic strategies on the E-T Scale.

The Present Research

Taylor et al.'s (under review) finding showed that individuals who prefer epistemic to teleologic strategies may spend more time thinking about an attitude object's undesired associations during deliberate self-persuasion, but that finding did not address the nature of the thoughts. According to research on the basic evaluation process and the Maio and Thomas (2007) review, people who use relatively epistemic versus teleologic strategies report more positive attitudes when they come to perceive associations as having a different valence, not just when they pay more attention to them and remember them better. Teleologic strategies might involve avoiding undesired associations, in which case they do not have to be perceived as having different valence in order to change attitudes, but epistemic strategies (see Table 1) are successful only to the extent that they change the perceived valence of associations. This difference between epistemic and teleologic strategies prompted the present hypothesis: That the relationship between change in valence of associated thoughts and attitude change should be greater for people who use epistemic strategies than for people who use teleologic strategies. This overall prediction was addressed in two studies, one of which measured the use of epistemic versus teleologic strategies as an individual difference and the other of which manipulated the use of epistemic versus teleologic strategies.

Study 1

Study 1 took an individual difference approach. We explored the cognitive changes underlying deliberate self-persuasion by examining associations and their valence directly. Using a free association method originally developed by McGuire and McGuire (1991), we instructed participants to free associate on the attitude object before and after the self-persuasion process, and to rate the attitudinal valence of each thought they generated. The hypothesis of Study 1 was that change in the perceived valence of thoughts associated with the attitude object ("going to the counseling center") would predict attitude change better for participants who, on the E-T scale (Taylor et al., under review), reported preferring relatively epistemic rather than teleologic strategies of deliberate self-persuasion.

Method

Participants

A total of 303 undergraduate students (202 women, 101 men) participated for course credit. Five participants were excluded because of incomplete data. The final data set consisted of 298 cases (197 women, 101 men)[1].

Procedure

The study had five parts: An online survey to measure attitudes and preference for epistemic versus teleologic strategies; measurement of initial association valence; a session of deliberate self-persuasion; a filler task; and measurement of post-manipulation association valence and attitudes.

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[1] No gender difference was found in attitudes, thought facilitativeness, or the interaction between self-persuasion strategies and thought facilitativeness.

Online survey. As part of a large online survey at the beginning of the semester, participants reported their attitudes toward "going to the counseling center" on a 7-point scale from -3 (*very negative*) to +3 (*very positive*). Only students with less than +3 initial attitudes were included in the sample, because students with +3 initial attitudes could not create more positive attitudes. During the same online survey, participants also reported their chronic preference for strategies of deliberate self-persuasion on the E-T Scale (Taylor et al., under review). Higher scores from the E-T Scale indicate a preference for epistemic strategies over teleologic strategies, whereas lower scores indicate the opposite.

Measurement of association valence. At the start of the main experiment, approximately 2 months after the initial online survey, participants free associated on the topic "going to the counseling center." They listed the first nine thoughts that occurred to them when they thought about that topic. Second, participants rated the *facilitativeness* of each thought they had listed; that is, the extent to which each of these thoughts would make a person want to go to the counseling center on a 7-point scale from -3 (*very much not want to*) to +3 (*very much want to*).

Deliberate self-persuasion. Participants were instructed to "sit quietly in your chair for the next 5 min and use your mental processes to make yourself have a more positive attitude toward going to the counseling center."

Filler task. After the self-persuasion session, all participants then completed an unrelated 13-min filler task in which they free associated to the names of 20 foreign countries (adopted from McGuire & McGuire, 1996). The filler task was intended to prevent participants from remembering their exact answers to the pre-manipulation

assessments, so that their answers to the post-manipulation assessments would be less biased by desire to respond consistently.

Post-manipulation assessments. Participants then completed the same free association measures as on the pre-manipulation survey, and reported their attitudes toward going to the counseling center for the second time. They were then debriefed, thanked for their participation and dismissed.

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Results

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The data were analyzed in terms of changes in attitudes and thought facilitativeness, and the interactive effects of scores from the E-T scale and thought facilitativeness change on attitude change.

Changes in attitudes and thought facilitativeness

The mean facilitativeness scores of the nine thoughts generated in each free association session by each participant served as an overall indicator of the extent to which participants' thoughts regarding "going to the counseling center" facilitated this behavior. Table 2 shows mean attitudes and thought facilitativeness before and after deliberate self-persuasion.

Table 2. Mean thought facilitativeness and attitudes in Study 1

	Before self-persuasion	After self-persuasion	Change
Thought facilitativeness	.29 (1.24)	.91 (1.23)	$.62^{**}$ (1.16)
Attitudes	.36 (1.22)	.57 (1.56)	$.21^{*}$ (1.61)
Correlation	$.14^{*}$	$.50^{**}$	

Note: Standard deviations are in parentheses. $^{*} p < .05$, $^{**} p < .01$.

Thought facilitativeness became more positive (Ms = .29 before and .91 after), t (297) = 9.22, p < .001, as did participants' reported attitudes (Ms = .36 before and .57 after), t (297) = 2.27, p = .02. Reported attitudes were significantly correlated with thought facilitativeness both before and after self-persuasion.

Effects of E-T scores and thought facilitativeness change on attitude change

Attitude change scores were regressed on change in mean thought facilitativeness, E-T Scale scores, and their interaction. The main effect of change in thought facilitativeness was significant, b = .25 (SE = .08), t = 3.18, p = .002, r^2 = .03, with a larger increase in thought facilitativeness leading to a larger positive change in attitude. This effect, however, was qualified by a significant interaction between change in thought facilitativeness and E-T Scale scores, b = .16 (SE = .08), t = 2.04, p = .04, r^2 = .02 (see Figure 1).

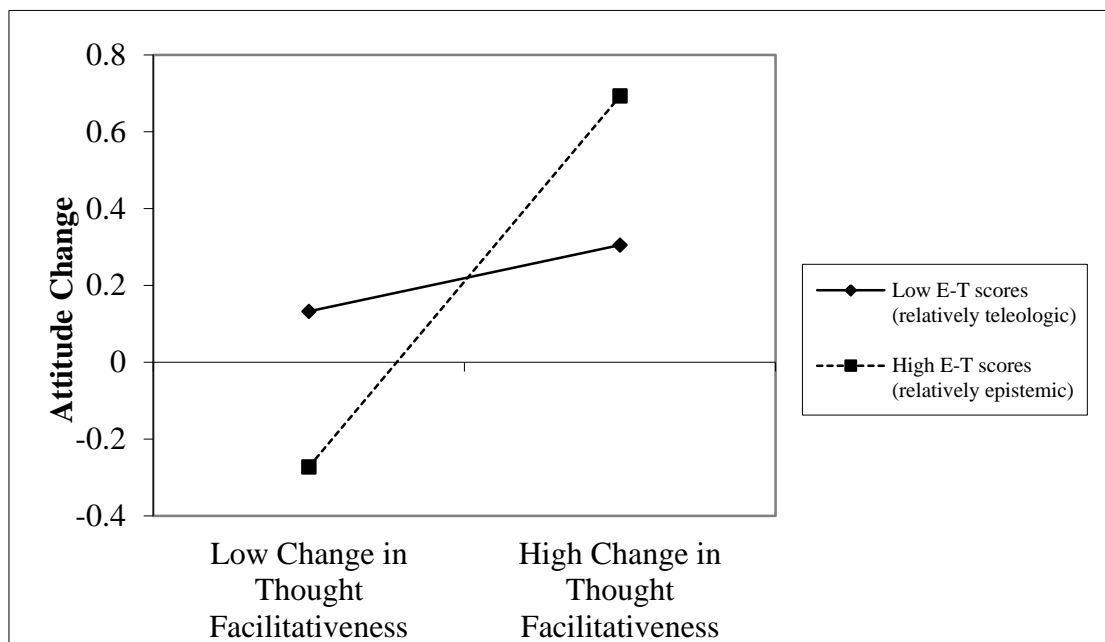Figure 1. Attitude change as a function of change in thought facilitativeness and E-T scores (Study 1). A higher value on the Y-axis indicates a larger attitude change in a positive direction. "Low" in thought facilitativeness change / E-T scores was defined as one standard deviation below the mean value. "High" in thought facilitativeness change/ E-T scores was defined as one standard deviation above the mean value.

For participants who preferred relatively epistemic strategies (with E-T scores 1 *SD* above the mean), simple slopes tests revealed that change in mean thought facilitativeness significantly predicted attitude change, $b = .42$ ($SE = .11$), $t = 3.69$, $p < .001$, $r^2 = .03$. However, for participants who preferred relatively teleologic strategies (with E-T scores 1 *SD* below the mean), thought facilitativeness change did not significantly predict attitude change, $b = .07$ ($SE = .12$), $t = .63$, $p = .53$, $r^2 = .001$.

Consistent with the reasoning advanced by Maio and Thomas (2007) and the scale developed by Taylor and associates (under review), change in perceived facilitativeness of spontaneous thoughts associated with going to the counseling center predicted attitude change better for participants dispositionally disposed to use relatively epistemic strategies for deliberate self-persuasion than for participants dispositionally disposed to use relatively teleologic strategies.

Study 2

One limitation of Study 1 was that participants' preference for different types of self-persuasion strategies was measured as an individual difference. Participants who differed in their E-T scores might have also differed in other ways. For example, previous research (Taylor et al., under review) has shown that scores from the E-T Scale are modestly correlated with scores from the Big Five Inventory (McCrae & Costa, 2003), Need for Cognition (Cacioppo & Petty, 1982) and Constructive Thinking Inventory (Epstein & Meier, 1989). Therefore, we cannot rule out the possibility that the effects found in Study 1 were driven by individual difference other than participants' preference for different types of self-persuasion strategies.

To address these problems in Study 2, we *manipulated* the strategies participants used for deliberate self-persuasion. A previous study (Resch & Lord, 2011) showed that individuals can temporarily adopt either epistemic or teleologic strategies effectively. The researchers developed a training procedure that successfully taught randomly selected participants either epistemic or teleologic strategies to change attitudes toward Arabs. We modified their training manuals to teach epistemic or teleologic strategies for changing attitudes toward "going to the counseling center." The hypothesis of Study 2 was that change in facilitativeness of associated thoughts would predict attitude change better for participants who were taught to use epistemic strategies than for participants who were taught to use teleologic strategies.

Method

Participants

A total of 205 undergraduate students (156 women, 48 men) participated for course credit. One participant was excluded because of incomplete data. Four participants were excluded because they had knowledge of the study before participating in the experiment. The final data set therefore consisted of 200 cases (152 women, 48 men).

Procedure

Experimental procedures were the same as in the Study 1 (with attitude report, listing thoughts associated with going to the counseling center, and rating the facilitativeness of each thought in both a pre-manipulation and a post-manipulation questionnaire and the filler task), except that before the self-persuasion session started, participants were randomly assigned to either the epistemic strategy condition or

teleologic strategy condition. Participants completed one of two self-persuasion strategy training manuals (Resch & Lord, 2011, see Appendix A and B).

Using the training manual, participants assigned to the epistemic strategy condition ($n = 94$) were taught how to use the six epistemic strategies (i.e., Motivated Interpretation, Motivated Integration, Motivated Attribution, Motivated Hypothesis Testing, Changing Comparators, and Changing Dimensions) to change their attitudes. For example, to learn Motivated Interpretation, participants first read brief description of that strategy in lay terms, and an example of how the strategy can be used to improve one's attitude toward one's romantic partner. Participants were then told to write down a target person or group of their own choice and an annoying characteristic of this target person or group. Participants practiced the strategy by writing a more desired interpretation of the annoying characteristic.

Participants assigned to the teleologic strategy condition ($n = 106$) were taught how to use the four teleologic strategies (i.e., Suppression, Distraction, Concentration, and Preemption) to change their attitudes. For example, to learn Suppression, participants first read a brief description of that strategy in lay terms, and an example of how the strategy can be used to improve one's attitude toward one's romantic partner. Then participants were told to write down a target person or group of their own choice and an annoying characteristic of this target person or group. Participants practiced the strategy by writing about how they would refuse to entertain thoughts of this characteristic.

After participants learned to apply either the epistemic or teleologic strategies to the targets of their own choice, they were told to use the same six or four strategies to make

their attitudes toward "going to the counseling center" more positive, guided by a packet

of instruction sheets (see Appendix C and D). The instructions reminded participants of

the essentials of each strategy, and then asked them to write how they were using each

strategy on "going to the counseling center."

Results

As in Study 1, the data were analyzed in terms of changes in attitudes and thought

facilitativeness, and the interactive effects of E-T scores and thought facilitativeness

change on attitude change.

Changes in attitudes and thought facilitativeness

The thought facilitativeness scores and attitude change scores were calculated as in

Study 1. Table 3 shows mean attitudes and thought facilitativeness before and after

deliberate self-persuasion.

Table 3. Mean thought facilitativeness and attitudes in Study 2

	Before self-persuasion	After self-persuasion	Change
Thought facilitativeness	-.45 (1.40)	-.18 (1.56)	.26** (1.02)
Attitudes	-.01 (1.34)	.27 (1.66)	.28** (1.47)
Correlation	.36**	.67**	

Note: Standard deviations are in parentheses. * $p < .05$, ** $p < .01$.

Thought facilitativeness became more positive (Ms = -.45 before and -.18 after), t

(199) = 3.62, $p < .001$, as did participants' reported attitudes (Ms = -.01 before and .27

after), t (199) = 2.64, $p = .009$. Reported attitudes were significantly correlated with

thought facilitativeness both before and after self-persuasion.

Effects of E-T strategies and thought facilitativeness change on attitude change

Attitude change scores were regressed on change in mean thought facilitativeness, self-persuasion strategy conditions (dummy coded) and the interaction of these two factors. Change in thought facilitativeness significantly predicted attitude change, $b = .64$ ($SE = .09$), $t = 7.00$, $p < .001$, $r^2 = .20$, with a larger increase in thought facilitativeness leading to a larger positive change in attitude. Self-persuasion strategy conditions also had a significant effect on attitude change, $b = .43$ ($SE = .19$), $t = 2.29$, $p = .02$, $r^2 = .03$, with participants who were trained to use epistemic strategies showing more positive attitude change than participants who were trained to use teleologic strategies.

Figure 2. Attitude change as a function of change in thought facilitativeness and self-persuasion strategy conditions (Study 2). A higher value on the Y-axis indicates a larger attitude change in a positive direction. "Low" in thought facilitativeness change was defined as one standard deviation below the mean value. "High" in thought facilitativeness change was defined as one standard deviation above the mean value.

The main effects, however, were qualified by a significant interaction between change in thought facilitativeness and self-persuasion strategy conditions, $b = .42$ (*SE*

= .18), $t = 2.30$, $p = .02$, $r^2 = .03$ (See Figure 2). Simple slope tests showed that change in thought facilitativeness significantly predicted attitude change for both participants who were trained to use epistemic strategies, $b = .84$ ($SE = .13$), $t = 6.71$, $p < .001$, $r^2 = .19$, and participants who were trained to use teleologic strategies, $b = .42$ ($SE = .13$), $t = 3.22$, $p = .001$, $r^2 = .05$. However, participants who were trained to use epistemic strategies changed their attitudes more than participants who were trained to use teleologic strategies only with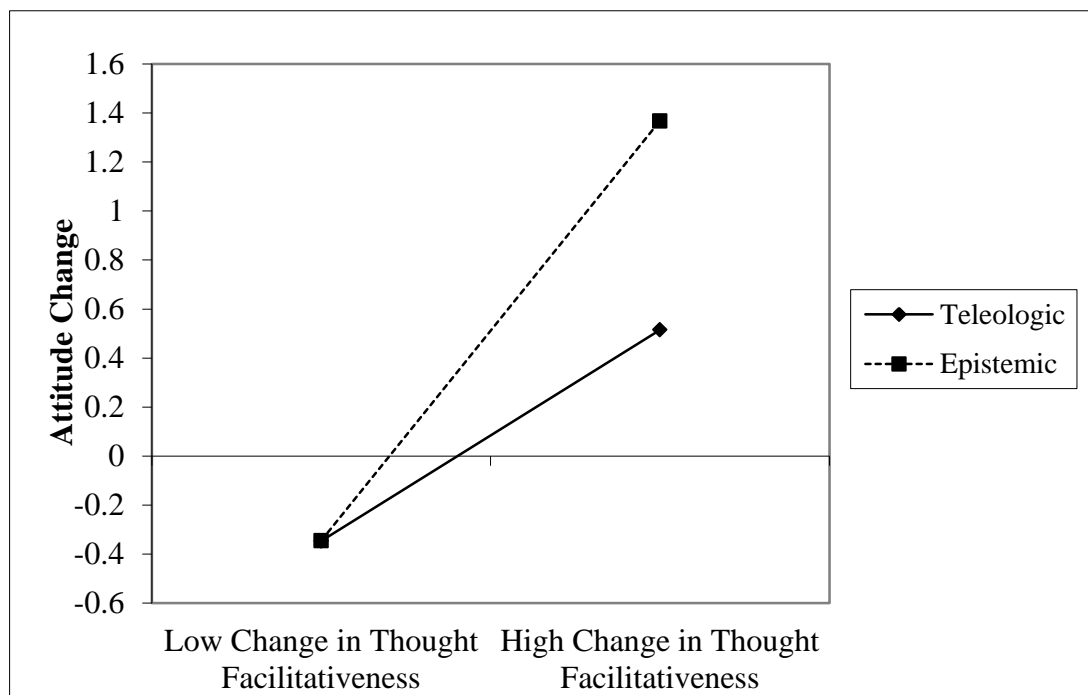 high change in thought facilitativeness (1 SD above the mean), $b = .85$ ($SE = .26$), $t = 3.26$, $p = .001$, $r^2 = .05$, but not with low change in thought facilitativeness (1 SD below the mean), $b = .001$ ($SE = .26$), $t = .01$, $p = 1.00$, $r^2 < .001$.

Study 2 conceptually replicated the result pattern from Study 1. Change in perceived facilitativeness of spontaneous thoughts associated with going to the counseling center predicted attitude change better for participants who were taught to use epistemic strategies than for participants who were taught to use teleologic strategies for deliberate self-persuasion. The alternative explanation that confounding individual differences could have produced the results was ruled out by randomly assigning participants into different self-persuasion strategy conditions.

General Discussion

Results from Studies 1 and 2 suggest that attitude changes are more congruent with changes in evaluative valence of thoughts associated the attitude object, for participants who use epistemic strategies than for participants who use teleologic strategies. This pattern reflects theoretically derived differences in the cognitive processes involved in epistemic versus teleologic strategies. Presumably, participants who use epistemic

strategies focus on improving the evaluative implications of originally undesired thoughts by performing cognitive modifications on their perceived valence. Participants who use teleologic strategies, in contrast, keep undesired thoughts from being activated, so they have less need to modify perceived valence (Maio & Thomas, 2007). The interaction between thought facilitativeness change and self-persuasion strategies, validated the conceptual distinction between the two types of self-persuasion strategies with convergent evidence from one study in which use of epistemic versus teleologic strategies was measured as an individual difference and a second study in which it was manipulated.

Implications for Basic Evaluation Process

A robust relation between thought facilitativeness change and attitude change was found in both experiments. This finding was in line with the idea that evaluative responses depend, at least in part, on the evaluative implications of cognitive association activated by an attitude object (Ajzen & Sexton, 1999; Lord & Lepper, 1999; Schwarz, Strack, & Mai, 1991). Many theorists view attitudinal evaluation as a two-step process: First activate cognitive representations associated to the attitude object, and then perceive the evaluative implications of these associations to form an evaluative response (Lord & Lepper, 1999; Schwarz & Bless, 1992; Schwarz & Bohner, 2001; Tourangeau, 1992). This theoretical framework implies that attitude change is a result of changes in the associations activated and/or the valences of these associations. No previous studies have directly examined the changes of cognitive associations underlying attitude change. The present studies were the first to show that the overall valence of associated thoughts covaries with both attitudes and their change.

Implications for Deliberate Self-Persuasion Strategies

The congruity between thought facilitativeness change and attitude change was more pronounced for participants who used epistemic strategies than for participants who used teleologic strategies, suggesting a tighter cognitive link between attitudes and the perceived evaluative implications of associated thoughts for people who use epistemic strategies. In the second step of the evaluative process, the final evaluative response is not necessarily a simple linear summation of the valences of the activated associations. The process through which a person forms the final evaluative response with activated associations can be moderated by contextual factors, such as subjective ease of the activation (Wanke, Bohner, & Jurkowitsch, 1997), perceived source of the associations (Martin, 1986), and perceived relevance of the associations to the attitude object (Bless & Schwarz, 2010). Epistemic strategies may have simplified this implication perception process, mapping the valences of associations onto the final evaluative response more directly. Presumably, consciously elaborating on the evaluative implications of the associated thoughts tightened their connections to the overall attitude, making the connections less vulnerable to the influences of contextual factors. In Taylor el. al.'s (under review, Study 4) study, participants who reported preferring epistemic strategies showed better memory for negative characteristics associated the attitude object, presumably because they kept the negative associations in their working memory to perform cognitive modifications on them. This finding, however, provided no direct evidence about what cognitive modifications were done to the associations. The present studies added to these results by demonstrating that

participants' overall valence of associated thoughts changed in the same direction as attitude change.

One interpretation of the results from Study 2 is that the congruity between thought facilitativeness change and attitude change was not only *enhanced* by epistemic strategies but also possibly *weakened* by teleologic strategies. This possibility could be tested by adding a "no training" control group to the design of Study 2. If epistemic strategies enhance the relationship between thought facilitativeness change and attitude change, thought facilitativeness change should predict attitude change better for individuals who are taught to use epistemic strategies than for individuals who are not taught to use any particular type of strategies. If teleologic strategies weaken the relationship between thought facilitativeness change and attitude change, thought facilitativeness change should predict attitude change worse for individuals who are taught to use teleologic strategies than for individuals who are not taught to use any particular type of strategies. These two possibilities are not mutually exclusive.

In short, the precise mechanisms of both epistemic and teleologic strategies require further investigation. It is unclear, for instance, how teleologic processes affect subsequent free associations regarding the attitude object. According to Maio and Thomas (2007), people adopt teleologic strategies to keep undesired thoughts inaccessible to their conscious mind. Participants might replace undesired thoughts with irrelevant or neutral thoughts (Wegner, 1994), a process that may not manifest itself in free association (Carlston, 1991). In the present studies, we did not allow participants to list as many associated thoughts as they see fit. Instead, they were forced to list an arbitrary number of

thoughts (nine thoughts) that they perceived as relevant to the attitude object in each free association session. Because of participants' efforts to keep out undesired associations when using teleologic strategies, the number of activated associations that had an impact on their attitudes could be so limited that it was less than the number of thoughts we asked for in each free association session. As a result, although all thoughts generated by teleologic strategy users in free association sessions might seem to be logically connected with the attitude object, some of them might not have been spontaneously activated and might merely have been listed in order to follow the instructions of free association. The noise caused by these pseudo-relevant thoughts might have weakened the connection between thought facilitativeness change and attitude change for participants who were taught to use or would dispositionally prefer, teleologic strategies. Future research may need to create new measures using parameters that are sensitive to the activation of cognitive associations (e.g., reaction time), in hopes that those measures can pinpoint the exact processes by which teleologic strategies lead to successful self-persuasion.

Future Directions

The difference in the underlying mechanisms of epistemic versus teleologic strategies implies that the two types of strategies might require different mental capacity. A previous study (Resch & Lord, 2011) showed that individuals low in self-control could not learn to use teleologic strategies effectively. Epistemic strategies were not affected by self-control. On the other hand, because epistemic strategies involve cognitive modifications on conscious thoughts, they may require an undisturbed working memory. A task that taxed the mental capacity required by one type of strategies might interfere

with the use of one type of strategies but not the other. Specifically, a self-depletion task that lowers self-control might make only teleologic strategy users less successful in changing their attitudes, whereas a concurrent memory task might only interfere selectively with the self-persuasion processes of epistemic strategy users. Future research can further validate the distinction between epistemic and teleologic strategies by interfering with the use of one but not the other type of strategies.

In the present and most of the previous studies on deliberate self-persuasion, epistemic versus teleologic strategies were either measured as a stable individual difference of preference, or manipulated as two mutually exclusive conditions. These procedures might create a false impression that people always stick to one type of strategies in self-persuasion. In their review, however, Maio and Thomas (2007) implied that most people switch between the two types of strategies based on situational requirements. For example, when time is too limited to perform cognitive modifications on the perceived valence of their thoughts, individuals may choose to fall back on teleologic strategies, which are less time consuming. In another line of future research, the interfering tasks discussed above can serve as situational manipulations. In the presence of a task that interferes with one type of self-persuasion strategies but not the other, participants who are free to choose strategies for deliberate self-persuasion may avoid the less useful strategies. The measures of associated thoughts and thought valences developed in the present studies might prove helpful in detecting the exact strategies participants choose to use.

In summary, the present studies showed that changes in the evaluative implications of thoughts associated to an attitude object predict attitude change. This relationship was

more pronounced for individuals who changed their own attitudes by cognitively modifying the perceived valence of associated thoughts than for those who changed their attitudes by trying to control their activation. These findings afford a peek "behind the stage" of deliberate self-persuasion.

Appendix A: Training Manual for Epistemic Strategies

Researchers have found that you can develop a more positive attitude toward just about anything and hold on to that new attitude if you set your mind to it. You can do it entirely on your own, with no help from anyone else, and without learning anything that you did not already know. You can also do it all in your head, without ever getting up from the chair you are sitting in. The only tools you need are a set of cognitive strategies that go by the acronym CONNeCT. People who do not know about these strategies usually find it very difficult to alter their own opinions, no matter how hard they try, whereas people who know about and use these strategies find that they can do it.

The beginning C stands for CONNECTED WITH. The O stands for ONLY BECAUSE. The first N stands for NO, BECAUSE. The second N stands for NOT AS IMPORTANT. The second C stands for COMPARED TO. The final T stands for THAT MEANS.

CONNeCT
Connected with
Only because
No, because
Not as important
Compared to
That means

In the pages to follow, we will teach you the **CONNeCT** set of strategies, and ask you to practice using them. Once you have tried these strategies for yourself, we believe that you will find them very useful in numerous life situations where you are motivated to develop a more positive opinion, or at least keep yourself from having too negative an opinion.

Appendix A: Training Manual for Epistemic Strategies

The CONNECTED WITH strategy involves recognizing that a problem might not really be a problem when considered as part of a larger pattern that is full of logically connected strengths. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "His/her jealousy is CONNECTED WITH other things that are positive qualities, like the fact that he/she always wants to be with me and only me and share all of life's experiences with me."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's initials here _____. What characteristic might he or she (that group) have displayed that annoyed you?

_____.

Now write that's CONNECTED WITH other things that are positive qualities such as

_____

_____.

Appendix A: Training Manual for Epistemic Strategies

The ONLY BECAUSE strategy involves finding a good, understandable reason for a problem. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "That's ONLY BECAUSE he or she lost a loved one early in life."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here _____. What characteristic might he or she (that group) have displayed that annoyed you?

_____.

Now write that's ONLY BECAUSE _____

_____.

Appendix A: Training Manual for Epistemic Strategies

The NOT REALLY, BECAUSE strategy involves thinking of good evidence to contradict what at first might appear to be a problem and using that evidence to argue for a strength, instead. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "NOT REALLY, BECAUSE he/she showed trust in me when he/she encouraged me to go out with my male and female friends from work, when ….., and when …..."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here ____. What characteristic might he or she (that group) have displayed that annoyed you?

_____.

Now write NOT REALLY, BECAUSE _____

_____.

Appendix A: Training Manual for Epistemic Strategies

The NOT AS IMPORTANT strategy involves reminding yourself of a positive attribute that is more important to you than a specific problem. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "That's NOT AS IMPORTANT to me as that he/she is so caring, dependable, and honest."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here ____. What characteristic might he or she (that group) have displayed that annoyed you?

_____.

Now write that's NOT AS IMPORTANT to me as that_____,

_____.

Appendix A: Training Manual for Epistemic Strategies

The COMPARED TO strategy involves reminding yourself of something or someone that has a much larger degree of a weakness. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "COMPARED TO _____, who did _____, my partner is very trusting."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here _____. What characteristic might he or she (that group) have displayed that annoyed you?

_____.

Now write COMPARED TO _____,

who_____,

_____.

Appendix A: Training Manual for Epistemic Strategies

The THAT MEANS strategy involves recognizing that all problems can also be regarded as strengths. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "THAT MEANS that he/she cares a lot about me."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here ____. What characteristic might he or she (that group) have displayed that annoyed you?

_____.

Now write THAT MEANS that_____.

Appendix B: Training Manual for Teleologic Strategies

Researchers have found that you can develop a more positive attitude toward just about anything, and hold on to that new attitude if you set your mind to it. You can do it entirely on your own, with no help from anyone else, and without learning anything that you did not already know. You can also do it all in your head, without ever getting up from the chair you are sitting in. The only tools you need are a set of cognitive strategies that go by the acronym DiReCT. People who do not know about these strategies usually find it very difficult to alter their own opinions, no matter how hard they try, whereas people who know about and use these strategies find that they can do it.

The beginning D stands for DENY ADMISSION. The R stands for REFUSE TO EXPERIENCE. The C stands for CONCENTRATE ON POSITIVES. The final T stands for THINK ABOUT SOMETHING ELSE.

DiReCT

Deny admission

Refuse to experience

Concentrate on positives

Think about something else

In the pages to follow, we will teach you the **DiReCT** set of strategies, and ask you to practice using them. Once you have tried these strategies for yourself, we believe that you will find them very useful in numerous life situations where you are motivated to develop a more positive opinion, or at least keep yourself from having too negative an opinion.

Appendix B: Training Manual for Teleologic Strategies

The DENY ADMISSION strategy involves watching out for negative thoughts or feelings so that you can cut them off at the pass, before they enter your conscious awareness, and blocking them so that they cannot intrude on your positive thoughts or feelings. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "I will DENY ADMISSION to even a hint of a negative thought or feeling about his/her seeming to be jealous, because I just won't let that kind of thought or feeling have any chance of getting into my head."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here ____. What characteristic might he or she (that group) have displayed that annoyed you? _____.
Now write I will DENY ADMISSION to any negative reaction about _____, which means that _____.

Appendix B: Training Manual for Teleologic Strategies

The REFUSE TO EXPERIENCE strategy involves keeping negative thoughts or feelings out of your awareness. Some negative thoughts or feelings might pop into your head before you can stop them. However, after you realize that they are there, push them away and try not to think about them. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "I can REFUSE TO EXPERIENCE a negative reaction to his or her seeming jealous, because the minute I realize thoughts about jealousy have started to happen, I will stop thinking about them."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here ____. What characteristic might he/she (that group) have displayed that annoyed you? _____.
Now write I can REFUSE TO EXPERIENCE a negative reaction to _____, which means that _____.

Appendix B: Training Manual for Teleologic Strategies

The CONCENTRATE ON POSITIVES strategy involves mentally reviewing a list of strengths to keep from thinking about a problem. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "I'm going to CONCENTRATE ON POSITIVES about him/her so that I'll forget about that. He/she is always considerate, always there when I need him/her, and always willing to listen to what I have to say."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here _____. What characteristic might he or she (that group) have displayed that annoyed you?

_____.

Now write I'm going to CONCENTRATE ON POSITIVES like_____.

Appendix B: Training Manual for Teleologic Strategies

The THINK ABOUT SOMETHING ELSE strategy involves deliberately distracting yourself by occupying your mind with some other unrelated topic. Remember, you are attempting to change your attitude using this strategy.

If your romantic partner displayed an irritating characteristic (for example, seemed jealous), you might say to yourself, "THINK ABOUT SOMETHING ELSE such as planning my course schedule for next semester, or mentally reviewing all of the items in my favorite store."

Try it yourself. Choose a person (group) who has displayed a characteristic that annoyed you. Write that person's (group's) initials here _____. What characteristic might he or she (that group) have displayed that annoyed you? _____
_____. Now write "I can THINK ABOUT SOMETHING ELSE like_____.

Appendix C: Deliberate Self-Persuasion Instruction (Epistemic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The CONNECTED WITH strategy involves recognizing that a problem might not really be a problem when considered as part of a larger pattern that is full of logically connected strengths.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix C: Deliberate Self-Persuasion Instruction (Epistemic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The ONLY BECAUSE strategy involves finding a good, understandable reason for a problem.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix C: Deliberate Self-Persuasion Instruction (Epistemic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The NOT REALLY, BECAUSE strategy involves thinking of good evidence to contradict what at first might appear to be a problem and using that evidence to argue for a strength, instead.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix C: Deliberate Self-Persuasion Instruction (Epistemic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The NOT AS IMPORTANT strategy involves reminding yourself of a positive attribute that is more important to you than a specific problem.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix C: Deliberate Self-Persuasion Instruction (Epistemic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The COMPARED TO strategy involves reminding yourself of something or someone that has a much larger degree of a weakness.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix C: Deliberate Self-Persuasion Instruction (Epistemic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The THAT MEANS strategy involves recognizing that all problems can also be regarded as strengths.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix D: Deliberate Self-Persuasion Instruction (Teleologic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The DENY ADMISSION strategy involves watching out for negative thoughts or feelings so that you can cut them off at the pass, before they enter your conscious awareness, and blocking them so that they cannot intrude on your positive thoughts or feelings.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix D: Deliberate Self-Persuasion Instruction (Teleologic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The REFUSE TO EXPERIENCE strategy involves keeping negative thoughts or feelings out of your awareness. Some negative thoughts or feelings might pop into your head before you can stop them. However, after you realize that they are there, push them away and try not to think about them.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix D: Deliberate Self-Persuasion Instruction (Teleologic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The CONCENTRATE ON POSITIVES strategy involves mentally reviewing a list of strengths to keep from thinking about a problem.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

Appendix D: Deliberate Self-Persuasion Instruction (Teleologic)

Now we would like you to apply the strategies on your own. Fill in the blanks with the name of one of the strategies you just learned and a description of the strategy. Next, use the strategy to improve your attitude toward "going to the counseling center". Remember, you are attempting to change your attitude using this strategy.

The THINK ABOUT SOMETHING ELSE strategy involves deliberately distracting yourself by occupying your mind with some other unrelated topic.

Try it yourself. Think of a thought associated with going to the counseling center that might sometimes make you not want to go. What that thought might be?

_____.

Now write _____

_____

_____.

References

Ajzen, I., & Sexton, J. (1999). Depth of processing, belief congruence, and attitude-behavior correspondence. In S. Chaiken, Y. Trope (Eds.) , *Dual-process theories in social psychology* (pp. 117-138). New York, NY US: Guilford Press.

Asch, S. E., & Zukier, H. (1984). Thinking about persons. *Journal of Personality and Social Psychology, 46*(6), 1230-1240.

Banse, R., & Kowalick, C. (2007). Implicit attitudes towards romantic partners predict well-being in stressful life conditions: *Evidence from the antenatal maternity ward. International Journal of Psychology, 42(3)*, 149-157.

Bellezza, F. S. (1984). The self as a mnemonic device: The role of internal cues. *Journal of Personality and Social Psychology, 47*(3), 506-516.

Cacioppo, J. T., & Petty, R. E. (1982). The need for cognition. *Journal of Personality and Social Psychology, 42,* 116-131.

Carlston, D. E. (1991). Free association and the representation of complex cognitive structures. In R. r. Wyer, T. K. Srull (Eds.), *The content, structure, and operation of thought systems* (pp. 87-96). Hillsdale, NJ England: Lawrence Erlbaum Associates, Inc.

Epstein, S., & Meier, P. (1989). Constructive thinking: A broad coping variable with specific components. *Journal of Personality and Social Psychology, 57,* 332-350.

Fleishman, E. A. (1965). Attitude versus skill factors in work group productivity. *Personnel Psychology, 18(3)*, 253-266.

Janis, I. L., & King, B. T. (1954). The influence of role playing on opinion change.

Journal of Abnormal and Social Psychology, 49, 211-218.

Lord, C. G., & Lepper, M. R. (1999). Attitude representation theory. In M. Zanna (Ed.),

Advances in experimental social psychology (Vol. 31, pp. 265–343). New York:

Academic Press.

Lord, C. G., Paulson, R. M., Sia, T. L., Thomas, J. C., & Lepper, M. R. (2004). Houses

Built on Sand: Effects of Exemplar Stability on Susceptibility to Attitude Change.

Journal of Personality and Social Psychology, 87(6), 733-749.

Maio, G. R., & Thomas, G. (2007). The epistemic-teleologic model of deliberate

self-persuasion. *Personality and Social Psychology Review, 11*, 46-67.

Martin, L. L. (1986).Set/reset: Use and disuse of concepts in impression formation.

Journal of Personality and Social Psychology Review, 11, 46-67.

McCrae, R. R., & Costa, P. T. (2003). *Personality in adulthood: A five-factor theory*

perspective. New York, NY: Guilford.

McGuire, W. J., & McGuire, C. V. (1991). The content, structure, and operation of

thought systems. In R. S. Wyer, Jr., & T. Srull (Eds.), *Advances in social cognition*

(Vol. 4, pp. 1–78). Hillsdale, NJ: Lawrence Erlbaum Associates.

McGuire, W. J., & McGuire, C. V. (1996). Enhancing self-esteem by directed-thinking

tasks: Cognitive and affective positivity asymmetries. *Journal of Personality and*

Social Psychology, 70(6), 1117-1125.

Petty, R. E., & Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. In

L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 19, pp.

124-205). New York: Academic Press.

Plaks, J. E., Shafer, J. L., & Shoda, Y. (2003). Perceiving individuals and groups as

coherent: How do perceivers make sense of variable behavior? *Social Cognition,*

21(1), 26-60.

Resch, H. L., & Lord, C. G. (2011). Individual differences in using epistemic and

teleologic strategies for deliberate self-persuasion. *Personality and Individual*

Differences, 50(5), 615-620.

Schwarz, N., & Bless, H. (1992). Constructing reality and its alternatives: An

inclusion/exclusion model of assimilation and contrast effects in social judgment. In

L. L. Martin, A. Tesser (Eds.) , Th*e construction of social judgments* (pp. 217-245).

Hillsdale, NJ England: Lawrence Erlbaum Associates, Inc.

Schwarz, N., & Bohner, G. (2001). The construction of attitudes. In A. Tesser & N.

Schwarz (Eds.), *Blackwell handbook of basic principles: Intraindividual processes*

(pp. 436-457). Oxford: Blackwell.

Schwarz, N., Strack, F., & Mai, H. (1991). Assimilation and contrast effects in part-whole

question sequences: A conversational logic analysis. *Public Opinion Quarterly, 55*(1),

3-23.

Sia, T. L., Lord, C. G., Blessum, K. A., Ratcliff, C. D., & Lepper, M. R. (1997). Is a rose

always a rose? The role of social category exemplar change in attitude stability and

attitude–behavior consistency. *Journal of Personality and Social Psychology, 72*,

501–514.

Taylor, C. A., Lord, C. G., Morin, A. L., Brady, S. E., Yoke K., & Lu, T. The E-T scale:

individual differences in preference for Epistemic vs. Teleologic tactics of deliberate

self-persuasion. Under review.

Tilleczek, K. C. (2011). Adjusting the rear view mirror: An examination of youth driving culture. Y*outh & Society, 43(2)*, 774-795.

Tourangeau, R. (1992). Attitudes as memory structures: belief sampling and context effects. In N. Schwarz & S. Sudman (Eds.), *Context effects in social and psychological research* (pp. 35-47). New York: Springer Verlag.

Wänke, M., Bohner, G., & Jurkowitsch, A. (1997). There are many reasons to drive a BMW: Does imagined ease of argument generation influence attitudes? *Journal of Consumer Research, 24(2)*, 170-177.

Wegner, D. M. (1989). *White bears and other unwanted thoughts: Suppression, obsession, and the psychology of mental control.* New York, NY US: Penguin Press.

Wegner, D. M. (1994). Ironic processes of mental control. *Psychological Review, 101*(1), 34-52.

Wenzlaff, R. M., & Wegner, D. M. (2000). Thought suppression. *Annual Review of Psychology, 51*: 59-91.

Whiston, S., & Rahardja, D. (2008). Vocational counseling process and outcome. In S. Brown & R. Lent (Eds.), *Handbook of counseling psychology* (4th ed.) (pp. 444-461). Hoboken, NJ: John Wiley & Sons Inc.

Wilson, T. D., & Hodges, S. D. (1992). Attitudes as temporary constructions. In L. L. Martin, A. Tesser (Eds.), *The construction of social judgments* (pp. 37-65). Hillsdale, NJ England: Lawrence Erlbaum Associates, Inc.

Wyer, R. S., & Srull, T. K. (1986). Human cognition in its social context. *Psychological*

Review, 93(3), 322-359.

Zanna, M. P., & Rempel, J. K. (2008). Attitudes: A new look at an old concept. In R. H.

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   7-15). New York, NY US: Psychology Press.

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ABSTRACT

BEHIND THE STAGE OF DELIBERATE SELF-PERSUASION:
WHEN CHANGES IN SPONTANEOUS ASSOCIATIONS TO AN ATTITUDE OBJECT
LEAD TO ATTITUDE CHANGE

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Modern theory and research on evaluative processes, combined with a comprehensive review of deliberate self-persuasion (Maio & Thomas, 2007), suggest two types of strategies people can use to construct new, more desired attitudes. Epistemic strategies change the perceived valence of associations activated by the attitude object. Teleologic strategies, in contrast, keep undesired associations from being activated in the first place, thus obviating the need to change their perceived valence. Change in perceived valence of associations, therefore, might predict attitude change better when people pursue epistemic than teleologic strategies for deliberate self-persuasion. This hypothesis gained convergent support from two studies in which use of epistemic versus teleologic strategies was measured as an individual difference (Study 1) and manipulated (Study 2). The results of these two studies supported the theoretical distinction between the two strategies and suggested further research directions.