

INDIVIDUAL DIFFERENCES  
IN USING EPISTEMIC AND TELEOLOGIC STRATEGIES  
FOR DELIBERATE SELF-PERSUASION

by

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## Individual Differences in Using Epistemic and Teleologic Strategies for Deliberate Self-Persuasion

People sometimes find themselves displaying attitudes that are unwanted, or even maladaptive. Soldiers returning from wars in Iraq and Afghanistan, for instance, find it difficult to alter the negative attitudes that they have acquired toward members of an enemy race or ethnic group (Hoge et al., 2004; Milliken, Auchterlonie, & Hoge, 2007; Ramchand, Karney, Osilla, Burns, & Calderone, 2008). They realize that their tendencies to attack people of that race or ethnic group in civilian life could get them in serious trouble, but they do not know how to change. Fortunately, some theorists have identified ways in which, according to the research evidence, people might be able to change their own attitudes simply by thinking differently about an attitude object.

Maio and Thomas (2007) recently reviewed two distinct types of cognitive strategies for such deliberate self-persuasion. Epistemic strategies involve re-conceptualizing the attitude object's known shortcomings in a more positive light. Teleologic strategies involve altering the accessibility of thoughts about those shortcomings. The present study tested whether people can be taught to use these two types of strategies, and whether there might be important individual differences in how effectively people can use the strategies. The study tested three specific hypotheses: that Maio and Thomas' (2007) two types of strategies can be taught effectively; that these two types of strategies are more effective for people high than low in need for cognition; and that teleologic strategies are less effective than epistemic strategies for people low in self-control.

Figure 1 shows the six epistemic and four teleologic strategies that were identified by Maio and Thomas (2007), with examples of how each strategy might be used by an

individual who regards Arabs as “suspicious” and wants to improve his or her attitude. Maio and Thomas (2007) extensively reviewed research that illustrates the epistemic and teleologic strategies, and advanced novel hypotheses about situational factors that might prompt using the strategies. No previous study, however, has used Maio and Thomas’ (2007) theoretical framework to develop and test an applied tool for teaching the two types of strategies. In addition, no previous research has investigated individual differences that might moderate these strategies for attitude change.

Figure 1. Maio and Thomas’ (2007) six epistemic and four teleologic strategies, with examples of how an individual who regards Arabs as “suspicious” might use each strategy to improve his or her attitude.

<b>Type</b>	<b>Strategy</b>	<b>Description</b>	<b>Example</b>
Epistemic	Motivated Interpretation	Reinterpret undesired attributes into more desired attributes	It is good to be suspicious of easy answers
	Motivated Integration	Reintegrate undesired attributes with desired attributes	People who are suspicious are also careful to make few mistakes
	Motivated Attribution	Reattribute undesired attributes to benign causal factors	Being unfairly profiled would make anyone suspicious
	Motivated Hypothesis Testing	Retest the validity of undesired attributes	Not really, because Arabs trust members of their own family completely
	Changing Comparators	Change the comparators for evaluating the attitude object	Arabs are not as suspicious as my ex-girlfriend, who had me followed
	Changing Dimensions	Change the dimensions on which the comparison is based	Cultural diversity is more important than being suspicious

Teleologic	Distraction	Operate to keep undesired elements out of awareness	Think instead about what I have to do this afternoon
	Suppression	Monitor to keep undesired elements out of awareness	Try not to think about how suspicious Arabs can be
	Concentration	Operate to keep desired elements in awareness	Think instead about the high level of diversity in Arab culture
	Preemption	Monitor to keep desired elements in awareness	Don't let thoughts of suspiciousness intrude on more positive thoughts

### **Need for Cognition**

One well-researched individual difference that might affect use of the Maio and Thomas (2007) strategies is need for cognition (Cacioppo & Petty, 1982). The need for cognition construct has been investigated in hundreds of studies (Petty, Brinol, Loersch, & McCaslin, 2009), and has proved important in understanding phenomena as diverse as decision making (Levin, Huneke, & Jasper, 2000; Yang & Lee, 1998), false memories (Graham, 2007), halo effects (Petty, Schumann, Richman, & Strathman, 1993), anchoring (Blankenship, Wegener, Petty, Detweiler-Bedell, & Macy, 2008; Epley & Gilovich, 2006), priming (Petty, DeMarree, Brinol, Horcajo, & Strathman, 2008), and stereotyping (Crawford & Skowronski, 1998).

Of particular relevance to present concerns, individuals who are high in need for cognition are more likely than those who are low in need for cognition to engage in and enjoy effortful cognitive activities (Cacioppo & Petty, 1982; Cacioppo, Petty, Feinstein, &



Jarvis, 1996). Learning to apply the Maio and Thomas (2007) strategies for deliberate self-persuasion would obviously take some cognitive effort, and individuals high in need for cognition find effortful reasoning and problem solving less stressful than do individuals low in need for cognition (Amabile, Hill, Hennessey, & Tighe, 1994; Cacioppo & Petty, 1984; Heppner, Reeder, & Larson, 1983; Olson, Camp, & Fuller, 1984). It seems possible, then, that although everyone might benefit from using the Maio and Thomas (2007) strategies, individuals who are high rather than low in need for cognition might apply them more effectively.

It might at first glance seem that individuals high in need for cognition would use epistemic strategies more effectively than teleologic strategies, but that is not the case. The epistemic strategies might be more “rational” than the teleologic strategies (see the examples in Figure 1), but need for cognition should not be confused with rationality. “Individuals high in NC can be heavily influenced by their intuitions, emotions, and images, but in thoughtful ways” (Cacioppo et al., 1996, p. 320). In addition, individuals high in need for cognition would be expected to do as well at using teleologic as at using epistemic strategies, because individuals who are high in need for cognition are better than individuals low in need for cognition at managing their attention (Enge, Fleischhauer, Brocke, & Strobel, 2008). It seems likely, then, that individuals who are high in need for cognition would be more likely than individuals who are low in need for cognition to change their attitudes when taught either epistemic or teleologic strategies.

### **Self-Control**

The difference between effectiveness of epistemic and teleologic strategies might be captured instead by self-control. Self-control “is commonly viewed as the active inhibition of

unwanted responses that might interfere with the achievement of desired goals” (Burkley, 2008, p. 419). People who are low in self-control tend to be impulsive. One of the items on Tangney, Baumeister, and Boone’s (2004) self-control scale, for instance, is “Sometimes I can’t stop myself from doing something, even if I know it is wrong.” They are also poor at resisting temptation, easily lose control, and wish they had more self-discipline (Tangney et al., 2004). Being low in self-control, then, might seriously impair efforts to keep negative thoughts out of conscious awareness (Wegner, Schneider, Carter, & White, 1987), which is exactly what is required by teleologic strategies (Maio & Thomas, 2007). Individuals who are relatively low in self-control might find it difficult to employ teleologic strategies of deliberate self-persuasion, because they would be especially subject to unwanted intrusions of the negative thoughts that they were trying to block (Macrae, Bodenhausen, Milne, & Jetten, 1994; Wegner et al., 1987).

It might be, though, that individuals who are low in self-control would change their attitudes readily when using epistemic rather than teleologic strategies. In several relevant studies, Burkley (2008) demonstrated that lowered self-control makes people more accepting of persuasive arguments. In Burkley’s (2008) Study 3, for example, he depleted self-control by having some college students, but not others, try to block thoughts of a white bear. After that, he presented all participants with strong arguments in favor of a shorter summer vacation. Those who had their self-control depleted were more accepting of the persuasive arguments and more likely to change their attitudes. Chronically low self-control, then, might make people more susceptible to persuasive arguments (Burkley, 2008), and people who pursue epistemic strategies generate their *own* persuasive arguments. It does not necessarily follow that susceptibility to one’s own persuasive arguments is the same as susceptibility to

someone else's persuasive arguments, but it seems at least possible that individuals low in dispositional self-control, although they might change their attitudes less than individuals high in dispositional self-control when using teleologic strategies, might also be more accepting of their own self-generated persuasive arguments and change their attitudes more than highs when using epistemic strategies.

### **The Present Study**

In the present study, college men and women reported their attitudes toward several social groups and categories, one of which was Arabs. Approximately two months later, those who had reported relatively negative attitudes toward Arabs participated in a seemingly unrelated study. Some of them were taught epistemic strategies for changing their own attitudes, some of them were taught teleologic strategies, and some were taught no strategies. Then they were all asked to sit quietly and make their attitudes toward Arabs more positive, after which they were asked to report their attitudes again. To determine whether deliberate self-persuasion was having any effect beyond possible changes in public opinion over the same time period, an additional group of participants were simply asked to report their attitudes toward Arabs again.

## **Method**

### **Participants**

A total of 320 college students (78 men and 242 women) participated for course credit.

## Procedure and Materials

Participants were chosen for the study because on a questionnaire at the start of the semester they had all reported attitudes toward Arabs that were at or below the mid-point on a scale from -3 = very negative to +3 = very positive (Appendix A).

Approximately two months after the initial questionnaire, 252 of the participants (61 men and 191 women) were led to believe that they would be taking part in two unrelated experiments. The first experiment was said to be about changing one's own attitudes. Participants were randomly assigned to receive one of three training manuals: epistemic strategy (n = 84), teleologic strategy (n = 84) or no strategy (n = 84).

Participants who received the epistemic (Appendix B) or teleologic strategy manuals (Appendix C) were taught how to use each of the six epistemic (or four teleologic) strategies (see Figure 1) to improve their attitudes, by first listing an annoying characteristic of a person of their choice, and then applying each strategy, in writing, to that annoying characteristic so as to adopt a more positive attitude toward that person. Then they were asked to recall the strategies, to list an annoying characteristic of a group of their choice, and then to apply each of the epistemic or teleologic strategies, in writing, to that annoying characteristic so as to adopt a more positive attitude toward that group. Participants in the no strategy condition also listed an annoying characteristic, first for a person and then for a group of their choice, and described how they would make their attitudes toward each of these targets more positive, but they were taught no strategies. Finally, participants in all three conditions were asked to list an annoying characteristic of Arabs, and then to try to make their attitudes toward Arabs more positive.<sup>1</sup>

All participants worked on their training manuals for a total of 35 minutes (10 for a person, 10 for a group, and 15 for Arabs). Then the experimenter thanked them for participating and led them to a different experimenter in a separate room. The second experimenter, who was blind to participants' experimental conditions, asked them to complete an attitude questionnaire (Appendix D) that included (among 19 other items) the same question about attitudes toward Arabs that participants had answered at the start of the semester.<sup>2</sup> Finally, participants completed several individual difference measures, including need for cognition (Appendix E; Cacioppo & Petty, 1982), perceived self-control (Appendix F; Tangney, et al., 2004), , and social desirability (Appendix G; Crowne & Marlowe, 1960)<sup>3</sup>.<sup>4</sup> and were thanked and thoroughly debriefed.

An additional 68 participants (17 men and 51 women) were in a test-retest “no attempt to change” control condition. They reported their attitudes toward Arabs on the same questionnaire at the start of the semester, and approximately two months later, but they were never asked to try to change their attitudes toward Arabs. This control group seemed necessary to establish a baseline of possible public opinion changes during the relevant time period, against which to compare changes in the three experimental groups.

## **Results**

### **Manipulation Check**

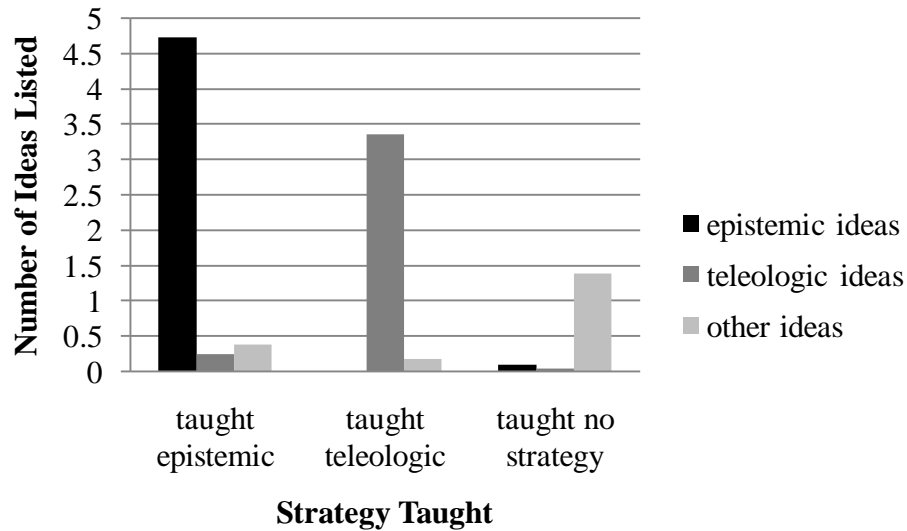
The author scored participants' booklets on the number of epistemic ideas, teleologic ideas, and other types of ideas that participants wrote on the final booklet, when asked to improve their attitudes toward Arabs on their own, with no further guidelines. Figure 2 shows that participants used the strategies that they had been taught. A 3 (strategy taught: epistemic,

teleologic, none) X 3 (ideas listed: epistemic, teleologic, other) mixed model ANOVA, with the *strategy taught* factor between-subjects and the *ideas listed* factor within-subjects, yielded the predicted two-way interaction,  $F(4, 498) = 395.75, p < .001$ .

Participants who were taught epistemic strategies used a mean of 4.73 epistemic ideas ( $SD = 1.75$ ) when they were later asked to improve their attitudes toward Arabs, compared to .24 teleologic ideas ( $SD = .63$ ) and .38 other types of ideas ( $SD = .62$ ), simple effects  $F(2, 166) = 525.05, p < .001$ . Similarly, participants who were taught teleologic strategies used a mean of 3.36 teleologic ideas ( $SD = 1.25$ ), no epistemic ideas, and .18 other ideas ( $SD = .47$ ), simple effects  $F(2, 166) = 348.04, p < .001$ . Finally, participants who were taught no strategies used a mean of 1.39 other types of ideas ( $SD = 1.57$ ), compared to .10 epistemic ideas ( $SD = .51$ ) and .04 teleologic ideas ( $SD = .24$ ), simple effects test  $F(2, 166) = 30.38, p < .001$ .

These means suggest that participants learned the epistemic and teleologic strategies that they were taught, and that they were both willing and able to apply those strategies when they were given no further guidelines about how to change their attitudes toward Arabs. Participants in the control condition, however, were unlikely to use either epistemic or teleologic ideas on their own. Instead, they used a wide variety of other ideas (e.g., “I would put myself in their shoes,” “I would try to learn more about Arab culture,” and “I would make friends with an Arab”) that did not appear to fall into any specific categories.

Figure 2. Number of Ideas of Each Type Written by Participants in Three Conditions

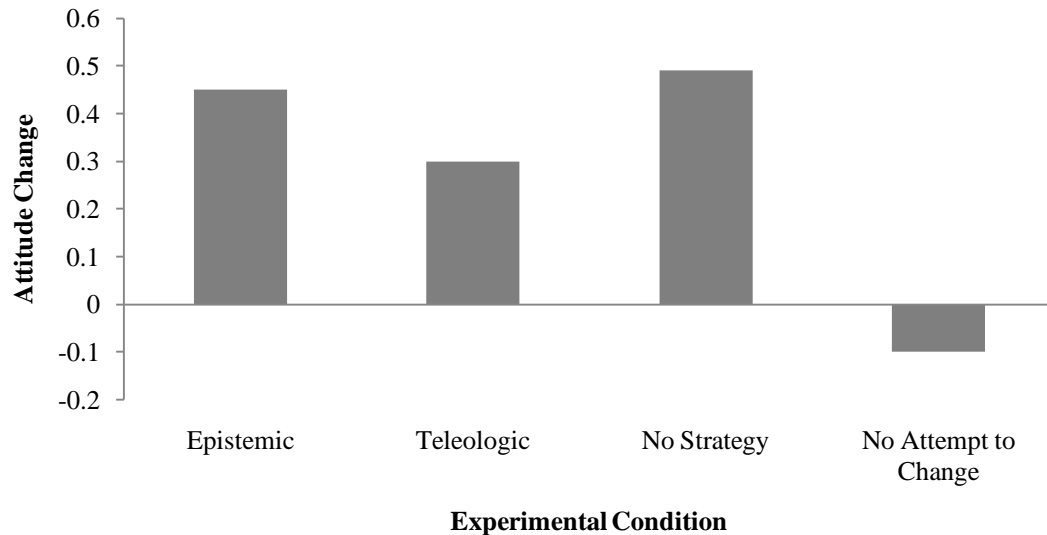


### Was Self-Persuasion Effective?

To test whether epistemic and teleologic strategies proved effective, attitude change scores (change in a positive direction from the initial questionnaire to post-manipulation) were subjected to a one-way ANOVA with four levels: epistemic strategies, teleologic strategies, no strategies, and no attitude change attempt. As shown in Figure 3, the four conditions differed significantly,  $F(3, 315) = 4.97, p = .002$ . Participants in the test-retest no attitude change attempt condition, who were not asked to change their attitudes toward Arabs, reported post-manipulation attitudes that had changed very little ( $M$  change =  $-.10, SD = 1.16$ ). By Dunnett's test ( $p < .05$ ), participants who were asked to change their attitudes but were taught no strategy for doing so ( $M$  change =  $.49, SD = 1.11$ ) changed their attitudes significantly more than did participants in the no attitude change attempt condition, as did participants who were asked to change their attitudes using epistemic strategies ( $M$  change =  $.45, SD = .95$ ) and participants who were asked to change their attitudes using teleologic strategies ( $M$  change =  $.30, SD = .92$ ). By Tukey's test ( $p < .05$ ), there were no significant

differences among the three conditions in which participants were asked to change their attitudes.

Figure 3: Mean Attitude Change in Four Conditions



These results show that self-persuasion was effective whether participants were taught a strategy or not. Compared to the test-test control group who simply took the test at the same two times in the semester but were not asked to change their attitudes (or to think of a negative trait for Arabs), participants who were taught either epistemic or teleologic strategies adopted significantly more positive attitudes toward Arabs, but so did participants who were only asked to ameliorate their attitudes, without being taught any specific ways to do so. One might suspect, then, that attitude change in all three experimental conditions might have been due to experimental demand. The experimenter asked participants to adopt more positive attitudes, and they did so merely because it seemed the socially desirable way to respond. This explanation depends, however, on participants recalling what their attitudes toward Arabs had been two months earlier, which other research suggests is unlikely (e.g., Bem & McConnell, 1970; Goethals & Reckman, 1973).



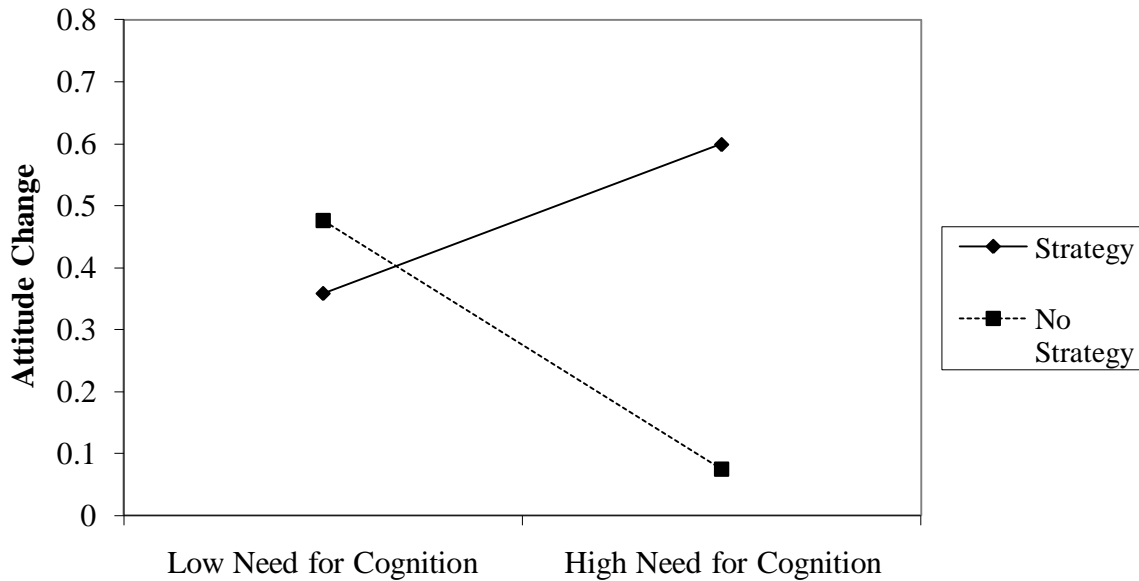
In addition, if participants were reporting more positive attitudes merely to please the experimenter, those who cared most about making socially desirable responses would have reported the most change, and this was not the case. Correlations between attitude change and scores on the social desirability scale were uniformly non-significant ( $r = .12$  in the epistemic condition,  $r = -.06$  in the teleologic condition, and  $r = -.07$  in the no strategy condition). It seems more likely, then, that participants in the no strategy condition used their own preferred strategies for self-persuasion, and that those preferred strategies, even though they were not epistemic or teleologic, worked well for them.

### **Did Some Individuals Benefit More Than Others from Being Taught the Strategies?**

Based on a review of relevant findings, it seemed possible that being taught the epistemic or teleologic strategies might prove more effective for individuals high rather than low in need for cognition. The following sections describe analyses that investigated this possibility.

*Need for Cognition.* To test whether need for cognition affected the relative efficacy of strategies versus no strategies, attitude change scores were regressed on participants' (centered) scores for the Need for Cognition Scale (Cacioppo & Petty, 1982), whether they were taught strategies or no strategies (dummy coded), and their interaction. Neither need for cognition nor strategy by itself predicted attitude change, but the interaction, which is shown in Figure 4, was significant,  $\beta = -.184$ ,  $b = -.008$  ( $SE = .003$ ),  $t = -2.37$ ,  $p = .019$ .

Figure 4: Effects of Strategy and Need for Cognition on Attitude Change



As shown on the left side of the figure, for participants low in need for cognition, being taught a strategy made no difference to attitude change,  $\beta = -.096$ ,  $b = -.201$  ( $SE = .19$ ),  $t = -1.06$ ,  $p = .291$ . As shown on the right side of the figure, for participants high in need for cognition, being taught a strategy produced significantly greater attitude change than did not being taught a strategy,  $\beta = .201$ ,  $b = .422$  ( $SE = .183$ ),  $t = 2.31$ ,  $p = .022$ .

Another way of looking at the results is that for participants who were taught a strategy, those high in need for cognition changed their attitudes more, but not significantly more, than those low in need for cognition, simple slopes  $\beta = .102$ ,  $b = .003$  ( $SE = .002$ ),  $t = 1.32$ ,  $p = .189$ . For participants who were not taught a strategy, in contrast, those high in need for cognition changed their attitudes significantly less than those low in need for cognition, simple slopes  $\beta = -.211$ ,  $b = -.005$  ( $SE = .003$ ),  $t = -1.973$ ,  $p = .05$ . These results suggest that, consistent with previous findings, need for cognition increases enjoyment and performance

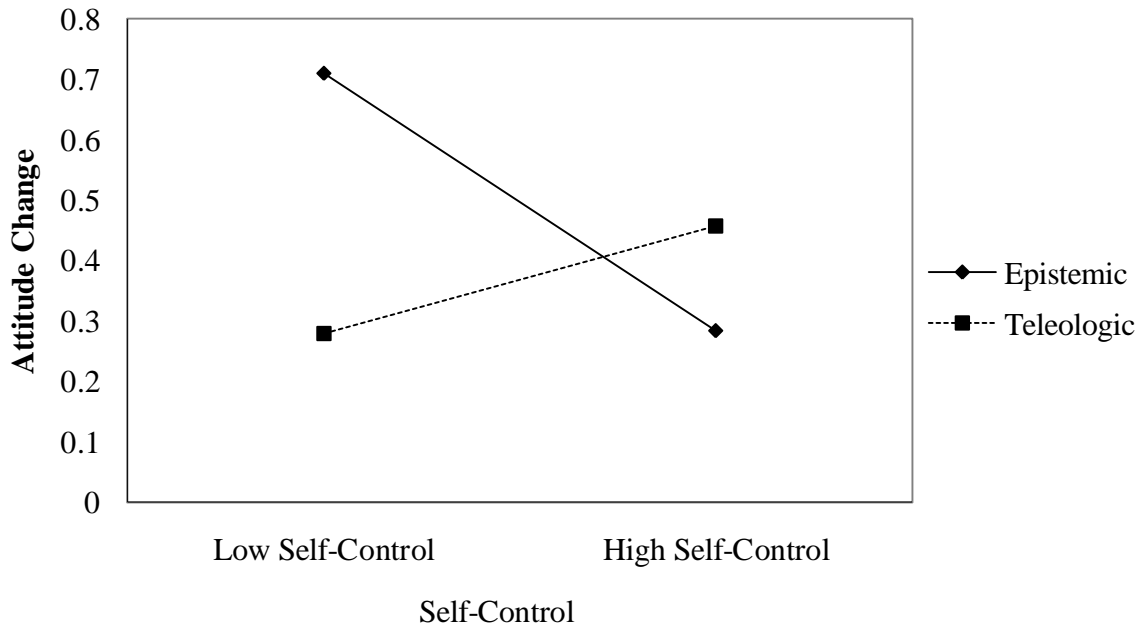
of new cognitive tasks, but most likely decreases both enjoyment and performance of a task (“make your attitude more positive”) that participants high in need for cognition might view as having more to do with managing their feelings than with cognitive engagement.

### **Did Some Individuals Benefit More from Being Taught One of the Strategies Than the Other?**

Based on a review of relevant findings, it seemed possible that some individuals might find epistemic strategies more effective than teleologic strategies, whereas others might benefit more from using teleologic than epistemic strategies. Specifically, individuals who are relatively low in self-control might have difficulty using teleologic but not epistemic strategies. The following sections describe analyses that investigated this possibility.

*Self-Control.* To test whether self-control affected the relative efficacy of epistemic versus teleologic strategies, attitude change scores were regressed on participants’ (centered) scores for the Self-Control Scale (Tangney, et al., 2004), whether they were taught epistemic or teleologic strategies (dummy coded), and their interaction. Type of strategy had no effect by itself, but self-control had a significant effect, in which participants relatively low in self-control were more likely to change their attitudes than were participants relatively high in self-control,  $\beta = -0.23$ ,  $b = -0.01$  ( $SE = 0.01$ ),  $t = -2.01$ ,  $p = 0.05$ . The interaction, which is shown in Figure 5, was also significant,  $\beta = 0.25$ ,  $b = 0.02$  ( $SE = 0.01$ ),  $t = 2.16$ ,  $p = 0.03$ .

Figure 5: Effects of Strategy and Self-Control on Attitude Change.



As shown on the left side of the figure, participants low in self-control changed their attitudes significantly more when they were taught epistemic strategies than when they were taught teleologic strategies,  $\beta = 0.27$ ,  $b = 0.50$  ( $SE = 0.21$ ),  $t = 2.375$ ,  $p = 0.02$ . As shown on the right side of the figure, participants high in self-control changed their attitudes equally whether they were taught epistemic or teleologic strategies,  $\beta = -0.06$ ,  $b = -0.12$  ( $SE = 0.19$ ),  $t = -0.59$ ,  $p = 0.56$ .

Another way of looking at the results is that when participants were taught epistemic strategies, those relatively high in self-control changed their attitudes less than did those low in self-control, simple slopes  $\beta = -0.23$ ,  $b = -0.01$  ( $SE = 0.01$ ),  $t = -2.01$ ,  $p = 0.05$ . When they were taught teleologic strategies, individual differences in self-control made no significant difference to attitude change, simple slopes  $\beta = 0.11$ ,  $b = 0.01$  ( $SE = 0.01$ ),  $t = 1.01$ ,  $p = 0.31$ . These results are consistent with previous findings that persuasive arguments (the hallmark of epistemic strategies) affect individuals who are low in self-control more than they affect

individuals who are high in self-control (Burkley, 2008). Apparently, self-persuasion works the same as persuasion by others.

### **Discussion**

The study reported here is important for several reasons. First, it is different from other studies of self-persuasion in that participants were instructed to try to change their attitudes without moving from their chairs. Most studies of self-persuasion have focused on the change that results from counter-attitudinal actions (Aronson, 2007). Second, it is the first study to apply and compare the strategies identified by Maio and Thomas (2007). Maio and Thomas (2007) wrote that their paper was meant to “serve as a guide to some testable distinctions among the diverse routes to deliberate self-persuasion, helping to elucidate important differences between the routes, possible determinants of choices between them, and effects of the routes” (p. 62), and the present research tried to fulfill that expectation. Third, we have shown that the epistemic and teleologic strategies can be taught. People can learn epistemic and teleologic strategies relatively quickly, and then apply those strategies to a new attitude object. Fourth, the study has shown that people are not reporting changes in attitudes simply to please the experimenter, because attitude change was not correlated with social desirability scores in any of the conditions. Finally, we have shown that there are important individual differences in the effectiveness of being taught epistemic and teleologic strategies for deliberate self-change.

Participants low in need for cognition changed their attitudes with or without being taught the Maio and Thomas (2007) strategies. Participants high in need for cognition, in contrast, displayed attitude change when they were taught a strategy, but no attitude change when they were taught no strategy. It is easy to understand why participants high in need for

cognition might have enjoyed using the Maio and Thomas (2007) strategies, but not so easy to understand why participants high in need for cognition changed so little when given no strategy. One possibility is that they assumed they were being asked to work with their feelings rather than with their thoughts, and the idea of wrestling with their feelings for 15 minutes did not appeal to them (Cacioppo & Petty, 1982).

Epistemic strategies worked better than teleologic strategies for participants low in self-control. One possible explanation is that participants low in self-control are more persuaded by their own arguments, just as they are by other people's arguments (Burkley, 2008). Another possible explanation might be that when individuals low in self-control try to practice teleologic strategies, they are especially subject to rebound effects that result from trying to keep unwanted thoughts out of conscious awareness (Wegner, et al., 1987).

The present study suggests many avenues for future research. For example, in future research, it would be interesting to use a multi-item attitude scale (Ajzen & Fishbein, 1980), such as that used by Bushman and Bonacci (2004) in their work on attitudes toward Arabs. Multi-item scales not only have greater reliability than one-item measures, but they are more likely to cover the full range of related constructs.

Future studies might also examine attitude change using both immediate and delayed measures. Maio and Thomas (2007) speculated that attitude change achieved through epistemic strategies might last longer than attitude change achieved through teleologic strategies. Not only might the main effects of attitude change be different with than without a delay, but interactions of the strategies with these individual difference measures might also be different.

Another possibility for future research is that researchers might use tape recorders rather than booklets in future research in order to capture more of the thought processes of the participants. In the present study, even though they were given 15 minutes to describe their cognitive processes when trying to change their attitudes toward Arabs, participants did not write enough to categorize the other strategies (other than epistemic and teleologic) that they used. Their sentences tended to be so cryptic and sparse that it was difficult to develop a taxonomy of the strategies that women used in the control condition, which would have been valuable because they changed their attitudes the most of any group. The use of tape recorders would allow participants to speak aloud their thoughts rather than trying to write them out in coherent sentences.

Measures of cognitive processes might also prove useful in understanding the underlying mechanisms. If participants using epistemic strategies focus intently on the negative attributes of Arabs that they list, whereas participants using the teleologic strategies try not to think about those same negative attributes, then these differences in cognitive process should create subsequent differences in memory for and accessibility of the negative attributes. Also, measures of cognitive accessibility for the negative attributes might be used to investigate whether participants low in self-control actually experience rebound effects when they try to apply teleologic strategies (Wegner, et al., 1987).

Finally, for the sake of generalizability it would be desirable in future research to show that the Maio and Thomas (2007) strategies can be taught effectively to change attitudes toward other social groups, not just Arabs, and to change attitudes as well toward many types of social policies (e.g., Lord et al., 1994) and activities (e.g., Ten Eyck, Gresky, & Lord, 2008). The studies that Maio and Thomas (2007) reviewed to build their theoretical

framework were primarily about changing attitudes toward romantic relationships and oneself, but the principles involved should apply equally to changing all types of attitudes, as should the interaction of these strategies with need for cognition (Cacioppo & Petty, 1982) and self-control (Tangney et al., 2004).

The attitude object used in the present study, however, was an important one. At this particular time in history, not only are many soldiers returning from war with dangerous attitudes toward Arabs (Hoge et al., 2004; Milliken, Auchterlonie, & Hoge, 2007; Ramchand, Karney, Osilla, Burns, & Calderone, 2008), but Arabs in Western culture have been increasingly subjected to stereotyping, prejudice, and discrimination (Bushman & Bonacci, 2004). The present study provides at least some optimism that psychologists are developing specific strategies for solving a currently salient and important societal problem, and that they have at least preliminary evidence regarding which types of individuals might find those strategies most and least effective.



Appendix A: Attitudes toward Arabs

Using the scale below, please indicate your attitude by selecting a number.

-3	-2	-1	0	1	2	3
Very Negative			Neither Positive nor Negative			Very Positive

Using the above scale, what is your attitude toward Arabs? \_\_\_\_\_

## Appendix B: Teaching epistemic strategies

**Name** \_\_\_\_\_

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 B: Teaching 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 B: Teaching 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 B: Teaching 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 B: Teaching 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 B: Teaching 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 B: Teaching 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: Teaching epistemic strategies

Name \_\_\_\_\_

Memory Test #1

Your goal in using these strategies is to hold a more positive attitude for how long?

\_\_\_\_\_

Write a short description of each of the strategies.

Connected with:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Only because:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

No, because:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Not as important:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(e)

Compared to:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

That means:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



## Appendix B: Teaching epistemic strategies

**Name** \_\_\_\_\_

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 B: Teaching epistemic strategies

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

The \_\_\_\_\_ strategy involves \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Try it yourself. Think of a characteristic of Arabs that might sometimes annoy you. What might sometimes annoy you?

\_\_\_\_\_.

Now write \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

## Appendix C: Teaching teleologic strategies

**Name** \_\_\_\_\_

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**

**D**eny admission

**R**efuse to experience

**C**oncentrate on positives

**T**hink 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 C: Teaching 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 can not 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 \_\_\_\_\_,

because\_\_\_\_\_

\_\_\_\_\_.

Appendix C: Teaching teleologic strategies

The **REFUSE TO EXPERIENCE** strategy involves keeping negative thoughts or feelings out of your awareness; push the negative thoughts or feelings 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 \_\_\_\_\_, because\_\_\_\_\_.

\_\_\_\_\_.

Appendix C: Teaching 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 C: Teaching 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: Teaching teleologic strategies

Name \_\_\_\_\_

Memory Test #1

Your goal in using these strategies is to hold a more positive attitude for how long?

\_\_\_\_\_

Write a short description of each of the strategies.

**Deny Admission:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(i)

**Refuse to experience:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(e)

**Concentrate on Positives:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Think about something else:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Appendix C: Teaching teleologic strategies

Name \_\_\_\_\_

Memory Test #2

Your goal in using these strategies is to hold a more positive attitude for how long?

\_\_\_\_\_

Name and describe each of the strategies.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

## Appendix C: Teaching teleologic strategies

**Name** \_\_\_\_\_

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**

**D**eny admission

**R**efuse to experience

**C**oncentrate on positives

**T**hink 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 C: Teaching teleologic strategies

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

The \_\_\_\_\_ strategy involves \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Try it yourself. Think of a characteristic of Arabs that might sometimes annoy you. What might sometimes annoy you?

\_\_\_\_\_.

Now write \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_.

Appendix D: Attitude Questionnaire

**Participant ID #:** \_\_\_\_\_

Using the scale below, please indicate how you feel about the following items.

-3	-2	-1	0	1	2	3
Very Negative Positive			Neither Positive nor Negative			Very

1. Using the above scale, how do you feel about fraternity and sorority members? \_\_\_\_\_
2. Using the above scale, how do you feel about politicians? \_\_\_\_\_
3. Using the above scale, how do you feel about Arabs? \_\_\_\_\_
4. Using the above scale, how do you feel about capital punishment? \_\_\_\_\_
5. Using the above scale, how do you feel about petitions to build highways? \_\_\_\_\_
6. Using the above scale, how do you feel about independents? \_\_\_\_\_
7. Using the above scale, how do you feel about gay men? \_\_\_\_\_
8. Using the above scale, how do you feel about Mexican-Americans? \_\_\_\_\_
9. Using the above scale, how do you feel about your romantic partner? \_\_\_\_\_
10. Using the above scale, how do you feel about your least favorite course? \_\_\_\_\_
11. Using the above scale, how do you feel about republicans? \_\_\_\_\_
12. Using the above scale, how do you feel about your life? \_\_\_\_\_
13. Using the above scale, how do you feel about the Sesame Street Muppets? \_\_\_\_\_
14. Using the above scale, how do you feel about democrats? \_\_\_\_\_
15. Using the above scale, how do you feel about environmentalism? \_\_\_\_\_
16. Using the above scale, how do you feel about smoking? \_\_\_\_\_
17. Using the above scale, how do you feel about African-American men? \_\_\_\_\_
18. Using the above scale, how do you feel about exercise? \_\_\_\_\_
19. Using the above scale, how do you feel about college sports? \_\_\_\_\_
20. Using the above scale, how do you feel about the elderly? \_\_\_\_\_



- international problems than about gossip or tidbits of what famous people are doing.
- \_\_\_ These days, I see little chance for performing well, even in "intellectual" jobs, unless one knows the right people.
  - \_\_\_ More often than not, more thinking just leads to more errors.
  - \_\_\_ I don't like to have the responsibility of handling a situation that requires a lot of thinking.
  - \_\_\_ I appreciate opportunities to discover the strengths and weaknesses of my own reasoning.
  - \_\_\_ I feel relief rather than satisfaction after completing a task that required a lot of mental effort.
  - \_\_\_ Thinking is not my idea of fun.
  - \_\_\_ I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something.
  - \_\_\_ I don't like to be responsible for thinking of what I should be doing with my life.
  - \_\_\_ I prefer watching educational to entertainment programs.
  - \_\_\_ I often succeed in solving difficult problems that I set out to solve.
  - \_\_\_ I think best when those around me are very intelligent.
  - \_\_\_ I am not satisfied unless I am thinking.
  - \_\_\_ I prefer my life to be filled with puzzles that I must solve.
  - \_\_\_ I would prefer complex to simple problems.
  - \_\_\_ Simply knowing the answer rather than understanding the reasons for the answer to a problem is fine with me.
  - \_\_\_ When I am figuring out a problem, what I see as the solution to a problem is more important than what others believe or say is the solution.
  - \_\_\_ It's enough for me that something gets the job done, I don't care how or why it works.'
  - \_\_\_ Ignorance is bliss.
  - \_\_\_ I enjoy thinking about an issue even when the results of my thought will have no effect on the outcome of the issue.



## Appendix F: Self-Control

Using the scale provided below, please indicate the best answer for each question by writing the correct number on the space next to each question.

1 2 3 4 5  
Not at all Very much

- \_\_\_ 1. I am good at resisting temptation.
- \_\_\_ 2. I have a hard time breaking bad habits.
- \_\_\_ 3. I am lazy.
- \_\_\_ 4. I say inappropriate things.
- \_\_\_ 5. I never allow myself to lose control.
- \_\_\_ 6. I do certain things that are bad for me, if they are fun.
- \_\_\_ 7. People can count on me to keep on schedule.
- \_\_\_ 8. Getting up in the morning is hard for me.
- \_\_\_ 9. I have trouble saying no.
- \_\_\_ 10. I change my mind on a fairly often basis.
- \_\_\_ 11. I blurt out whatever is on my mind.
- \_\_\_ 12. People would describe me as impulsive.
- \_\_\_ 13. I refuse things that are bad for me.
- \_\_\_ 14. I spend too much.
- \_\_\_ 15. I keep everything neat.
- \_\_\_ 16. I am self-indulgent at times.
- \_\_\_ 17. I wish I had more self-discipline.
- \_\_\_ 18. I am reliable.
- \_\_\_ 19. I get carried away by my feelings.
- \_\_\_ 20. I do many things on the spur of the moment.
- \_\_\_ 21. I don't keep secrets well.
- \_\_\_ 22. People would say that I have iron self-discipline.
- \_\_\_ 23. I have worked or studied all night at the last minute.
- \_\_\_ 24. I'm not easily discouraged.
- \_\_\_ 25. I'd be better off if I stopped to think before acting.
- \_\_\_ 26. I engage in healthy practices.
- \_\_\_ 27. I eat healthy foods.
- \_\_\_ 28. Pleasure and fun sometimes keep me from getting work done.
- \_\_\_ 29. I have trouble concentrating.
- \_\_\_ 30. I am able to work effectively toward long-term goals.
- \_\_\_ 31. Sometimes I can't stop myself from doing something, even if I know it is wrong.
- \_\_\_ 32. I often act without thinking through all of the alternatives.
- \_\_\_ 33. I lose my temper too easily.
- \_\_\_ 34. I often interrupt people.
- \_\_\_ 35. I sometimes drink or use drugs to excess.
- \_\_\_ 36. I am always on time.

## Appendix G: Social Desirability Scale

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you.

- T F 1. Before voting I thoroughly investigate the qualifications of all the candidates.
- T F 2. I never hesitate to go out of my way to help someone in trouble.
- T F 3. It is sometimes hard for me to go on with my work if I am not encouraged.
- T F 4. I have never intensely disliked anyone.
- T F 5. On occasion I have had doubts about my ability to succeed in life.
- T F 6. I sometimes feel resentful when I don't get my way.
- T F 7. I am always careful about my manner of dress.
- T F 8. My table manners at home are as good as when I eat out in a restaurant.
- T F 9. If I could get into a movie without paying and be sure I was not seen, I would probably do it.
- T F 10. On a few occasions, I have given up doing something because I thought too little of my ability.
- T F 11. I like to gossip at times.
- T F 12. There have been times when I felt like rebelling against people in authority even though I knew they were right.
- T F 13. No matter who I'm talking to, I'm always a good listener.
- T F 14. I can remember "playing sick" to get out of something.
- T F 15. There have been occasions when I took advantage of someone.
- T F 16. I'm always willing to admit it when I make a mistake.
- T F 17. I always try to practice what I preach.
- T F 18. I don't find it particularly difficult to get along with loud-mouthed, obnoxious people.
- T F 19. I sometimes try to get even, rather than forgive and forget.
- T F 20. When I don't know something I don't at all mind admitting it.
- T F 21. I am always courteous, even to people who are disagreeable.
- T F 22. At times I have really insisted on having things my own way.
- T F 23. There have been occasions when I felt like smashing things.
- T F 24. I would never think of letting someone else be punished for my wrongdoings.
- T F 25. I never resent being asked to return a favor.
- T F 26. I have never been irked when people expressed ideas very different from my own.
- T F 27. I never make a long trip without checking the safety of my car.
- T F 28. There have been times when I was quite jealous of the good fortune of others.
- T F 29. I have almost never felt the urge to tell someone off.
- T F 30. I am sometimes irritated by people who ask favors of me.
- T F 31. I have never felt that I was punished without cause.
- T F 32. I sometimes think when people have a misfortune they only got what they deserved.
- T F 33. I have never deliberately said something that hurt someone's feelings.

## Footnotes

1. Half of the participants in each of the three conditions were asked to improve their attitudes “just for today” and half were asked to do so “for the rest of your life.” Analyses of this factor yielded no significant main effects or interactions, and will not be discussed further.

2. Participants also completed a modified version of the IAT (Greenwald, McGhee, & Schwartz, 1998) in which they had to pair good and bad words with White names (e.g., Adam, Steve) and/or Arab names (e.g., Abdul, Ahmed), and a version of the Racial Arguments Scale (Saucier & Miller, 2003) that had been modified to focus on Arabs rather than African Americans. The particular version of the IAT that was used could not yield the difference score that is the preferred measure in modern research (Schnabel, Assendorpf, & Greenwald, 2008), and the modification of the RAS was not pre-tested. Analyses of these measures yielded no significant main effects or interactions, so they will not be discussed further.

3. Participants were also asked about attitudinal ambivalence. Analyses of this measure yielded no significant main effects or interactions, and will not be discussed further.

4. Participants also completed a measure of Modern Racism (McConahay, 1986). Because this measure was administered after the manipulation and may have been affected by the teaching of the strategies, however, the results will not be discussed further.

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## ABSTRACT

### INDIVIDUAL DIFFERENCES IN USING EPISTEMIC AND TELEOLOGIC STRATEGIES FOR DELIBERATE SELF-PERSUASION

by Heather Leigh Resch, MA, 2010  
Department of Psychology  
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Research suggests that it is possible to change one's own attitudes through cognitive restructuring, without taking actions or discovering previously unknown information. Some theorists, in fact, have identified two distinct types of cognitive strategies for such deliberate self-persuasion. Epistemic strategies involve re-conceptualizing the attitude object's known shortcomings in a more positive light; teleologic strategies involve altering the accessibility of thoughts about those shortcomings. People can be taught to use these types of cognitive strategies to alter their negative attitudes, for instance toward a group such as Arabs. The present research showed that people can think themselves into more positive attitudes toward a stigmatized social group, that some individuals benefit more than others from being taught one of these strategies, and that people differ in which strategy type works better for them. The individual differences that emerged are seen as affording new insights into the application of the strategies for self-persuasion.