

MOTIVATED RESISTANCE TO COUNTERATTITUDINAL ARGUMENTS:
THE EFFECTS OF AFFIRMATION, ARGUMENT STRENGTH AND ATTITUDE
IMPORTANCE

by

Joshua Correll

A thesis presented to the University of Waterloo in fulfillment
of the thesis requirement for the degree of
Master of Arts
In
Psychology

Waterloo, Ontario, Canada, 2000

©Joshua Correll, 2000

AUTHOR'S DECLARATION FOR ELECTRONIC SUBMISSION OF A THESIS

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Motivated Resistance to Counterattitudinal Arguments

The effects of affirmation, argument strength and attitude importance

Abstract

In this study we explored some of the factors associated with biased processing of attitude-relevant information. We were particularly interested in the possibility that a self-affirmation, by reducing self-evaluative concerns, might increase participants' willingness to impartially evaluate information that conflicts with their current views. We examined students' reactions to arguments about increasing tuition as a function of four factors: attitude importance, argument strength, the congruence of arguments with existing attitudes, and our experimental manipulation of affirmation. We found that affirmation reduced biased evaluation only for participants who rated the issue as important. We also found that affirmation dramatically impacted the perception of argument strength. Stronger counterattitudinal arguments were rejected by non-affirmed participants, who did not distinguish them from weak arguments, presumably because of the esteem threat posed by a strong ideological challenge. Affirmed participants, though, evaluated strong counterattitudinal arguments more positively.

Acknowledgements

I gratefully acknowledge Steven J. Spencer and Mark P. Zanna with whom this project was designed, and under whose guidance it was conducted. I thank Sean Hauck for his assistance in collecting the data, and Bernadette Park and Charles M. Judd for their assistance with the analysis. Not least, I thank Dr. Paul G. Davies for fruitful discussions and tireless support throughout this research.

Table of Contents

Introduction.....	1
Overview	8
Method.....	9
Participants and Design	9
Premeasures	9
Manipulation of Affirmation.....	10
Debate.....	11
Dependent Measures.....	12
Procedure	13
Results	15
Effects of Advocate	15
Effects of Argument Strength	17
Discussion	19
References	24
Figure 1	27
Figure 2	28
Figure 3	29

List of Illustrations

Figure 1	27
Figure 2	28
Figure 3	29

Introduction

At an early age, children learn that “sticks and stones may break my bones, but words will never hurt me.” How realistic a goal is this? When an important belief is challenged, either by a playmate or a new journal article, the kind of equanimity proclaimed in this poem above can prove difficult to attain. A pointed verbal challenge really can hurt, and we may find ourselves unable to respond dispassionately. Instead, we often mount considerable resistance, rationalizing, counterarguing, using a variety of strategies that allow us to ignore the merits of the opposing view and maintain our current set of beliefs (Lord, Ross & Lepper, 1979; Ross & Lepper, 1980).

Leon Festinger (1957) recognized this phenomenon and noted that, when confronted with a counterattitudinal position, we often attempt either to impugn the validity or applicability of the challenge itself, or to find fault with its source in an effort to reduce the dissonance between what we already believe and what we now hear. These strategies, alone or in tandem, reduce the impact of a counterattitudinal position, while leaving other, attitude-consistent information intact. The net effect is to redefine the world around us in ways that tend to reinforce our current system of beliefs, regardless of their accuracy (Hamilton & Rose, 1980; Munro & Ditto, 1997; Ross & Ward, 1995). Through this systematic distortion, our attitudes often exert a powerful influence over our interpretation of new information.

In an early example of biased interpretation, Hastorf and Cantril (1954) asked Dartmouth and Princeton students to watch a film of a hard-fought football game between their two schools. The researchers found that the participants,

though all watching the same film, had dramatically different impressions of the game's events. Where Dartmouth fans saw a fair play, Princeton fans saw a flagrant Dartmouth violation. Where Princeton students saw justifiable retaliation, Dartmouth students saw unwarranted aggression. The research shed serious, if not surprising, doubt on our ability to objectively evaluate information that implicates a source of identity.

In the decades since "They Saw a Game," social psychologists have amassed an extensive body of research dealing with the influence that prior beliefs wield over our perception of new information (Darley & Gross, 1983; Duncan, 1976; Jacobs & Eccles, 1992; Gilovich, 1991; Ross & Ward, 1995). Research on biased assimilation (Lord, Ross & Lepper, 1979), for example, has highlighted our ability to cull support for our own views from ambiguous information, while rejecting information that might lead us to consider an alternative view. Studies of the hostile media effect (Vallone, Ross & Lepper, 1985) have demonstrated our tendency to vilify a neutral party, such as a newscaster, who presents ambiguous information without adopting a position favorable to our own. Perhaps we attribute bias and hostility to this person to account for the fact that he or she, though in possession of all the information, has not reached the conclusion that seems so obvious to us, as we observe the situation through the "distorting lenses of ideology and self-interest" (Ross & Ward, 1995).

A common theme in much of the research described above is the use of opposing groups to demonstrate bias. Students at one school see things differently than students at a rival institution; supporters and opponents of the death penalty

both seem to think the same information supports their divergent positions; pro-Israeli and pro-Arab students both perceive a particular newscaster as biased against their side. The work implies that both sides somehow systematically misconstrue information, that they both tend to perceive support for their views in ways that are, objectively, unwarranted. By virtue of the differences between the subjective perceptions of one side and the subjective perceptions of the other side, we infer that there is an objective reality somewhere in the middle.

An alternative method for demonstrating bias, of course, is to contrast it with a more impartial evaluation. Howard-Pitney, Borgida and Omoto (1986), for example, selected participants who expressed either a high or a low level of concern about changing the legal drinking age. The researchers provided participants with arguments both for and against raising the drinking age to 21. Their results showed that high involvement was associated with more positive reactions to proattitudinal statements and more negative reactions to counterattitudinal statements, relative to low involvement, which was associated with more moderate reactions all around. Similarly, an experimental manipulation capable of reducing or eliminating the distorting effects of bias should allow a contrast between bias and objectivity or, at least, between bias and less-pronounced bias. Recent work by Reed and Aspinwall (1998) and Cohen, Aronson and Steele (2000) has attempted exactly this sort of manipulation.

Cohen et al. (2000) explored the idea that attitudes constitute fundamental aspects of identity. If this were the case, they reasoned, disconfirmation of a given view would not only threaten the particular attitude, it would jeopardize the

integrity of the general self-concept. Their argument suggests that the purpose of defensive attempts to discredit counterattitudinal information, like those cited above, may not be the protection of an attitude, *per se*, but rather the protection of the global self-concept as a whole. This prediction is derived from self-affirmation theory (Steele, 1988; Steele, Spencer & Lynch, 1993), which suggests that the global self-concept depends on a number of domains that collectively define the important aspects of a person's life. When one of those domains is threatened, the individual risks losing a source of identity and positive self-regard. To avoid this unpleasant consequence, a person will often opt to counteract the threat directly, defending the embattled domain. The loss of a domain may be tolerated, though, if the individual can turn to other domains – other important facets of identity – and draw on them to bolster the self-concept. In the latter case, the global self-concept is satisfied through alternative means, and the individual can actually leave the initial threat unresolved.

Cohen and his colleagues (2000) used this framework to examine reactions to pro- and counterattitudinal arguments on issues such as capital punishment and abortion. Participants in the experimental (affirmed) condition were asked to write about important values unrelated to these issues, providing them with salient, easily accessible resources on which to draw in the face of a threat. Participants in their control condition wrote about less relevant topics. When confronted with the arguments, controls tended to exhibit bias consistent with the research discussed above. They rated arguments more favorably when those arguments supported their own views and less favorably when they presented a

challenge; they showed pronounced attitude polarization, becoming more strident in their views after exposure to mixed information; and they demonstrated a preference for like-minded communicators over those expressing a counterattitudinal position. Among affirmed participants, though, these tendencies were reduced significantly. Relative to controls, participants in the affirmed condition, were more critical when rating the proattitudinal arguments and communicators, more positive when rating the counterattitudinal, and less likely to polarize their views. The research suggests that self-affirmation fosters a more impartial evaluation of views on these highly divisive, emotion-laden topics.

Similarly, Reed and Aspinwall (1998) showed that an affirmational experience reduced biased processing of information on self-relevant health-risk information. High frequency caffeine drinkers were more likely to find information about the risks of caffeine persuasive after they had an opportunity to affirm their kindness.

A critical assumption of the self-affirmation perspective is that the counterattitudinal position threatens the individual. Because a valuable affirmational resource is jeopardized, the non-affirmed participants react defensively. If the threat is not dangerous enough, or if the resource is not important enough, there is no reason to expect the participant to mount a defense. Recall that in the study on attitudes about the drinking age (Howard-Pitney et al., 1986), high-involvement participants reacted negatively to counterattitudinal messages, but low-involvement participants were more moderate. Self-affirmation theorists might account for this finding by suggesting that, in this

context, involvement is an index of the degree to which a person identifies with a given issue and, as such, an index of the degree to which that person depends on his or her view on that issue for self-definition. Only for the highly involved individual will an ideological challenge on a given issue constitute a meaningful threat. Accordingly, Reed and Aspinwall (1998) found that affirmation did not lead to a reduction in biased processing of their health-risk message among low-frequency caffeine drinkers, who presumably did not feel threatened in the first place because of their minimal involvement.

Similarly, it seems logical to assume that a poor counterattitudinal argument would pose a much weaker threat to a person's belief than would a very strong, well-reasoned argument. In fact, a weak argument may constitute such a mild threat that it does not endanger the global self-concept in the first place, which may allow the individual to evaluate it without resorting to defensive strategies. At the same time, a strong argument may produce a great deal of resistance. This leads to the intriguing prediction that people may not always prefer strong counterattitudinal arguments over weak messages, or even differentiate between them, because the very qualities that give a strong argument its strength also prompt the audience to resist it. Research by Liberman & Chaiken (1992), among others (see Zanna, 1993, for a review), has shown that less discrepant messages are sometimes more persuasive, which may be interpreted as a consequence of the greater self-threat associated with highly discrepant messages. In their work, these researchers did not vary argument quality, but if the self-affirmation interpretation of their results is correct, we might expect

similar effects for argument strength: A strong argument should produce more resistance than a weak argument. We would also expect an affirmation to ameliorate this tendency by removing the personal significance of the strong argument, without diminishing its perceived strength.

In the current study, we attempted to replicate and extend the prior research, examining a different issue and utilizing a different manipulation of affirmation. A primary goal of the current research was to examine reactions as they unfold over time. The sensitivity of the current methodology provided on-line ratings of particular arguments, allowing us to gauge the role of argument strength, and its interaction with the experimental manipulation, in shaping reactions to different types of messages, even as the individual processes them. We also included direct measures of issue importance to elucidate its role as a moderating variable, influencing the degree of perceived threat in the face of a counterattitudinal challenge. Prior research (Reed & Aspinwall, 1998) has tapped the related concept of involvement, but to the best of our knowledge, a direct examination of importance has not been conducted.

Overview

Participants watched a videotaped debate on the merits of a tuition increase, an issue that was highly relevant on campus at the time of the study¹. In the debate, an advocate for raising tuition and an advocate for freezing tuition took turns, through three rounds, presenting arguments for their respective positions. While watching the video, participants continuously rated the debaters' arguments using small handheld devices called Perception Analyzers. The Analyzers allowed us to record participants' ratings second by second, providing a richer and more detailed look at reactions to individual arguments than has been common in prior research and giving us an opportunity to conduct a fine-grained analysis of the effects of the experimental manipulation over time. Prior to watching the videotape, participants completed a brief scale, which constituted the experimental manipulation. Participants in the affirmed condition answered questions about a subjectively important value, while participants in the non-affirmed control condition answered questions about a less important value.

¹ Immediately before the study began, students at Waterloo and other Ontario schools demonstrated to protest the increasing price of higher education. And, during the course of the study, Ontario passed legislation severely restricting future increases in academic fees throughout the province.

Method

Participants and Design

Participants were 44 undergraduates at the University of Waterloo, who participated in this research for credit in an introductory psychology class. Participants were randomly assigned to either the affirmation condition or the non-affirmation control condition. Two participants were excluded from the analysis because they failed to follow the experimenter's instructions. One participant was excluded because his scores on initial measures were missing, and two others were excluded because their responses on these measures indicated that, contrary to our expectations, they supported a tuition increase. Finally, one participant was excluded because he expressed suspicion about the experimental manipulation. This left a total of 38 participants (17 in the affirmed condition, 21 in the control condition). The primary dependent variable was based on participants' Perception Analyzer ratings of the debaters' persuasiveness, which we averaged across each block of arguments. Additional dependent measures included Likert scale ratings taken while the videotape was paused between rounds of the debate, and a series of final questionnaires completed after the debate had ended.

Premeasures

Initial measures were obtained through a mass-testing booklet administered 10-12 weeks before the experimental sessions. The mass-testing questionnaires were distributed to an introductory psychology class, and students who completed the booklet received course credit. The initial measures included

ratings of attitudes toward a tuition increase and the issue's subjective importance. Both ratings were made on seven-point Likert scales. The attitude measure ranged from 1 (completely opposed to a tuition increase) to 7 (completely in favor of a tuition increase). The measure of importance ranged from 1 (not at all important) to 7 (extremely important). On a separate page of the booklet, participants rank ordered a list of four values (art, business, science, and social) in terms of their personal importance. This ranking was used to identify important and unimportant values for each participant, data that we used in the manipulation of affirmation.

Manipulation of Affirmation

We manipulated affirmation through the use of values scales (Allport, Vernon & Lindsey, 1960). Each participant completed one of four scales, each focusing on one of the values listed above: art, business, science and social. Participants in the affirmed condition completed the scale corresponding to the value they had rated as most important during mass testing. Participants in the control condition received the value they had rated least important. Each scale asks the participant to choose between the scale's primary value (e.g., science) and one of the other three values. For example, the science scale asks, "Which of the following men should be judged as contributing more to the progress of mankind: Aristotle or Abraham Lincoln?" a question designed to pit a scientific value system against a social orientation. The science lover who completes this scale has ten opportunities to proclaim the superiority of that value, affirming both the importance of science and his or her global self-concept. For a person who thinks

little of science, who perhaps values art, instead, the scale will not provide a clear opportunity for self-affirmation. The art lover will have a few chances to choose art over science, but will also be faced with choices between scientific and social values, and scientific and business values – choices that do not involve his or her most important value. In total, the art lover will encounter only three or four chances for affirmation in the ten-question scale.

Debate

The debate consisted of three rounds. During a given round, each debater spoke once, stepping up to a podium and presenting an uninterrupted series of arguments for his position. The advocate for tuition increase spoke first in rounds one and two, but last in the final round. This sequence followed the standard debate format and allowed us to take advantage of both primacy and recency effects to maximize the impact of the counterattitudinal arguments. Both advocates were male members of the University of Waterloo debate team, and were roughly matched in physical appearance. The debate was scripted beforehand, allowing us to control the nature and order of the arguments. In each round, the debaters addressed a series of points, some of which were designed to be particularly strong, some of which were designed to be moderate in strength, and some of which were intended to be rather weak. The variation in strength allowed us to examine the role of an argument's strength and its interaction with both the affirmation and the advocate who presents it. Examples of weaker and stronger arguments follow.

Counterattitudinal weak argument: “Higher tuition may actually make us better students. If we pay more for our education, we’ll treat our time here more seriously. Imagine for a moment that we had to pay twice as much money as we pay now. Would people be so willing to blow off their classes and their studying?”

Counterattitudinal strong argument: “I expect to graduate and get a good job that more than compensates me for the tuition I pay now. Employers and graduate schools know that Waterloo is a good school, and that reputation will serve us well in the future... . Tuition is just part of the investment, and I, for one, am willing to pay a little more in order to improve my chances in the outside world.”

Dependent Measures

During the experimental session, participants used Perception Analyzers to rate the two debaters on a 101-point scale ranging from 0 (not at all persuasive) to 100 (extremely persuasive). Perception Analyzers are small, wireless electronic devices, with a dial and a digital display. The number shown on the digital display represents the dial’s position at any given time. As the user turns the dial clockwise, the number increases from 0 to 100, which, in the current study, would indicate an increase in the participant’s rating of the speaker’s persuasiveness. The Perception Analyzers transmit data to a near-by receiver and lap-top computer,

which records the readings. During the debate in this study, the participants' ratings were recorded at intervals of one second (see Figure 1).

At multiple points during the session, the experimenter paused the videotape and asked participants to use their Perception Analyzers to answer additional questions. For these questions, the Analyzers were reconfigured to allow Likert-type responding on seven-point scales. After each round of the debate, participants indicated which debater they thought was more persuasive on a scale ranging from 1 (debater in favor of a tuition increase was much more persuasive) to 7 (debater opposed to an increase was much more persuasive). Before the debate began, and again after each round, participants also indicated their current attitude toward a tuition increase on a scale identical to the one used in the mass-testing booklet.

Procedure

Before the experimental session, participants were randomly assigned to condition. Groups of participants, ranging in size from 1 to 7, were met by two male experimenters and seated at a long table facing a TV/VCR². The experimental manipulation, consisting of the value scale, was presented as a pilot test for a separate project, which participants were asked to voluntarily complete

² Due to the complexity of the equipment in this study, we found it useful to have two experimenters in the room. The principle experimenter was responsible for communicating with the participants and explaining the details of the study, while the secondary experimenter assisted by distributing materials and facilitating the synchronization of the videotape and perception analyzer equipment.

before beginning the current study. All participants complied with this request. After completing the scale, the participants were thanked and each received a perception analyzer. The experimenter introduced the current study as an effort to better understand students' attitudes toward a tuition increase. He informed them that they would be watching a videotaped debate and responding to a number of questions. Participants subsequently responded to a series of practice questions to familiarize themselves with the Perception Analyzers, including a question about their attitudes toward a tuition increase. After the practice questions, our primary dependent measure, the 101-point persuasiveness scale, was projected above the television screen, where it would be visible to the participants during the debate. The experimenters then played the tape and began to record the Perception Analyzer data. After each of the first two rounds, and at the conclusion of the debate, the videotape was paused while participants responded to supplemental questions. The experimenters then collected the Analyzers. Finally, the participants were probed for suspicion and knowledge about the status of legislation on tuition, debriefed, and thanked for their participation.

Results

Effects of Advocate

We conducted a 2 X 2 X 3 X 3 mixed-model analysis of variance with one between-participants factor (condition: affirmation vs. control) and three within-participants factors (advocate: counter-attitudinal vs. pro-attitudinal; argument strength: strong vs. moderate vs. weak; and round of the debate: 1 vs. 2. vs. 3). For this analysis, we computed each participant's average Perception Analyzer rating for each argument³. These mean ratings served as the dependent variable. Based on Cohen et al. (2000), we expected to find a two-way interaction between affirmation and advocate, such that non-affirmed participants rated the proattitudinal debater's arguments more positively than those of the counterattitudinal debater, while this tendency was attenuated among the affirmed participants. We also expected a three-way interaction between condition, advocate, and argument strength. While this three-way effect did emerge, the fundamental interaction between condition and advocate did not. In addition to the three-way, we found only main effects for advocate, $F(1,34) = 6.62$, $p < .05$) and for round, $F(1,34) = 9.03$, $p < .01$, suggesting that the proattitudinal advocate was rated more favorably, overall, than the counterattitudinal advocate,

³ In calculating averages for these and all other analyses of the Perception Analyzer data, we excluded data from the first 25 seconds during which the debater presented his argument. This procedure was intended to provide enough time for the participants to hear and react to the new arguments, and to make sure that the averages were not influenced by their ratings of previous statements.

and that ratings generally decreased over the course of the three rounds.⁴ Following Cohen et al. (2000, Study 3) we then included pretest ratings of the issue's subjective importance as a covariate in our model, but found that importance interacted with our manipulation and was therefore inappropriate as a covariate. When we included importance as a continuous factor in our model, a somewhat surprising picture emerged. The regression yielded a two-way interaction for advocate and importance, $B=-4.55$, $t(34)=-2.35$, $p<.05$. We also obtained two three-way interactions, the first between condition, advocate and importance, $B=6.31$, $t(34)=3.26$, $p<.01$; and the second, as described above, between condition, advocate and strength, $B=-4.28$, $t(34)=-2.21$, $p<.05$.

We sought to clarify these results by examining the effects of an affirmation at higher and lower levels of issue importance. To accomplish this, following Judd and McClelland (1989), we repeated our analysis twice, first recentering importance scores at one standard deviation above the mean, and subsequently at one standard deviation below. The results confirmed our general predictions. At higher levels of importance, we found a main effect for advocate, $B=9.18$, $t(34)=-2.56$, $p<.05$, such that proattitudinal arguments were rated more positively than the counterattitudinal messages (see Figure 2). We also found the anticipated interaction between condition and advocate, $B=11.12$, $t(34)=3.09$, $p<.01$). Separate

⁴ Although round did exhibit this main effect, it did not interact with any other factors. For the sake of simplicity, we report the following results without distinguishing between rounds, though the findings do not change if round is retained as a factor. Averaging across round, by advocate, yielded Cronbach's alphas of .89 and .84 for the three proattitudinal and counterattitudinal rounds, respectively.

analyses of the pro- and counterattitudinal ratings revealed that, contrary to our predictions, affirmed participants did not give significantly higher persuasiveness ratings for the counterattitudinal arguments than did controls. However, they were more negative when rating proattitudinal arguments, $B=-8.16$, $t(34)=-2.59$, $p<.05$. For low-importance participants, there were no significant effects.

Effects of Argument Strength

To assess the effects of argument strength, we sought to clarify the three way interaction between condition, advocate and strength. For the like-minded advocate, we anticipated only main effects for strength and condition. We expected that participants in both conditions would rate the stronger proattitudinal argument as more persuasive, but that, consistent with earlier findings, affirmed participants would be less positive overall in their assessments of their own side, rating their arguments, both strong and weak, as less persuasive than their non-affirmed counterparts. For the counterattitudinal advocate, though, we expected that non-affirmed participants would fail to recognize the merit of the stronger argument. Because of the esteem threat posed by a strong counterattitudinal position, we expected non-affirmed participants to defend themselves by denying the argument's merit. We hypothesized that ratings of the counterattitudinal advocate's weak and strong arguments would reveal a condition by strength interaction.

To simplify the three-way interaction, then, we looked at the effects of affirmation and strength separately for proattitudinal and counterattitudinal arguments (see Figure 3). For counterattitudinal arguments, the persuasiveness

ratings revealed a main effect for strength, $B=-4.48$, $t(34)=-2.32$, $p<.05$, such that stronger arguments were preferred over weaker arguments. We also found an interaction between strength and affirmation, $B=-3.89$, $t(34)=-2.02$, $p<.05$. While non-affirmed participants did not reliably distinguish between weak and strong counterattitudinal arguments, participants in the affirmed condition rated the stronger arguments as more persuasive, $t(16)=-2.90$, $p=.01$. Intriguingly, in an analysis of simple effects, the two conditions did not differ significantly on either the weak or the strong argument, when analyzed separately, as we had predicted. An examination of reactions to the proattitudinal position revealed only a predictable effect for strength, $B=-9.4$, $t(34)=-3.81$, $p<.01$.

Discussion

In this study we extended the findings of Cohen et al. (2000) by demonstrating that self-affirmation affects people's on-line processing of persuasive information. Consistent with self-affirmation theory we found that only when the attitude was personally relevant did people demonstrate biased processing of the information. When the issue was unimportant, affirmation had no effect on the processing of information. For high-importance participants, though, we found the predicted decrease in persuasiveness ratings of the proattitudinal argument, though the corresponding increase in ratings of the counterattitudinal argument was not significant. Given the nature of our study, we were also able to analyze ratings of distinct arguments. As predicted, we found that non-affirmed participants did not reliably distinguish between weak and strong counterattitudinal messages. Affirmed participants, though, did distinguish between weak and strong, and rated the stronger counterattitudinal argument as more persuasive.

In interpreting these findings and relating them to prior research, we must first address the role of importance. The ability of our manipulation to attenuate bias seemed to depend largely on participants' subjective perceptions of the importance of the tuition increase question. Among those who felt that the issue was important, our affirmation manipulation had the desired effect, enabling them to see merit in a counterattitudinal position. For those who attributed less importance to the issue, the affirmation had no effect.

Perceptions of issue importance have been shown to moderate reactions to persuasive communication (Pomerantz, Chaiken & Tordesillas, 1995; Zuwerink & Devine, 1996). Pomerantz and her colleagues (1995) characterized attitude strength as a function of commitment to a given position and embeddedness, or the degree to which the attitude is linked to the self-concept. The importance of an issue, then, seems to be largely a function of how central it is to identity. This view of attitude importance is very similar to the self-affirmation representation of attitudes as bases of self-worth, and it suggests that challenging an important attitude is very different from challenging an unimportant view precisely because, for the former, the challenge has greater implications for the self. Theoretically, a self-affirmation functions by alleviating concerns about self-worth created by a threatening situation. Accordingly, in this study, we predicted that an affirmation would reduce the threat of a counterattitudinal appeal, enabling participants to evaluate the argument based on its merit instead of its congruency with their existing views. But this prediction rests on the assumption that participants find the argument threatening in the first place. For people who consider the tuition issue relatively unimportant, this assumption may not be warranted. These individuals, facing an ideological challenge on an issue that seems trivial to them, may see the challenge as irrelevant to their feelings of self-worth. Among these individuals, the challenge would not raise any self-evaluative concerns, and in the absence of a threat, we cannot expect palliative measures to produce an effect. The situation is akin to evaluating the effectiveness of a Band-Aid when neither experimental nor control condition has been cut. If this admittedly post-hoc view

is correct, however, and not simply a defensive effort to maintain our beliefs in the face of ambiguous evidence, how is it possible that Cohen et al. (2000) achieved results that do not seem to be moderated by importance in this way?

Recall that Cohen et al. (2000) reported that affirmation promotes acceptance of a counterattitudinal position, without explicitly addressing the issue's subjective importance. Although, Cohen and his colleagues did use importance as a covariate in their third study, their other analyses did not account for it at all. That is, their results were largely independent of importance ratings. We would like to suggest that these differences can be attributed to differences in the nature of the issues addressed in the various studies. Our research examined attitudes toward tuition, which, though it does have immediate financial consequences for students, may be seen more as a practical issue and less as an answer to the question, "Who am I?" Because this issue has no fundamental connection to personal identity for many students, challenges to related attitudes may not always threaten feelings of self-worth. The previous work, on the other hand, examined attitudes on abortion and capital punishment – issues that may have been perceived as highly important by most, or even all, of the participants involved. Attitudes toward these issues may often be associated with broader belief systems, such as religion and human rights, which play a large role in defining the self. Accordingly, attacks on these views may produce anxiety for a larger proportion of participants than attacks on attitudes toward tuition. In essence, participants in the previous research may have all effectively fallen in the "high-importance" range, where our effects emerged.

Our findings regarding argument strength present a different, but not unrelated, pattern. In this study, non-affirmed participants did not seem to differentiate between weak and strong counterattitudinal arguments in ratings of persuasiveness. Affirmed participants, on the other hand, rated the stronger argument as more persuasive. Stronger arguments, by their nature, more effectively repudiate current views, and so may be generally expected to create a more threatening situation than weaker arguments. Self-affirmation theory would accordingly predict greater resistance to stronger challenges. While our control participants did not actually rate the stronger arguments as less persuasive than the weaker, neither did they appreciate their strength. This failure to recognize argument strength supports the idea that people may distort their perceptions of a challenge to protect their views. Alternatively, of course, it is possible that our strong and weak arguments really didn't differ in persuasiveness, though the clear distinction made by participants in the affirmed condition and the main effect of strength overall both argue otherwise. Affirmed participants rated the stronger argument as significantly more persuasive than the weaker, which is consistent with self-affirmation theory. Our manipulation, thus, seemed to allay the anxiety produced by the stronger message, allowing affirmed participants to recognize its relative merit.

If we grant the assumption that attitudes can serve as affirmational resources, variability in strength among arguments may in some ways be seen as parallel to variability in subjective importance ratings among participants. Stronger arguments and higher subjective importance may both be expected to

enhance the threat of a counterattitudinal message to the global self-image: the former by challenging established views more effectively, and the latter by increasing the individual's dependence on those views. Self-affirmation theory would therefore expect each of these factors to independently increase participants' resistance. Our results support both predictions and, taken together, provide convergent evidence for our initial premise. Analyses in terms of two distinct independent variables, argument strength and subjective importance, suggest that attitudes can serve as bases of self-worth, and that the individual will strive to protect them.

On a final note, the use of the Perception Analyzers to obtain virtually continuous ratings provided us with an opportunity to examine reactions that would generally be overlooked by traditional research methods. The extraordinary detail provided by such equipment has, we feel, the potential to revolutionize research on attitudes. As psychologists have used reaction time measures to ask a fundamentally different type of question, continuous measures, yielding more sensitive evaluations than have been common, may provide researchers with an opportunity to reframe the nature of psychological inquiry.

References

- Allport, G. W., Vernon, P. E., Lindzey, G. (1960). Study of values. Boston: Houghton Mifflin.
- Cohen, G. L., Aronson, J., & Steele, C. M. (2000). When beliefs yield to evidence: Reducing biased evaluation by affirming the self. *Personality and Social Psychology Bulletin*, 26, 1151-1164.
- Darley, J. M. & Gross, P. H. (1983). A hypothesis-confirming bias in labelling effects. *Journal of Personality and Social Psychology*, 44, 20-33.
- Duncan, B. L. (1976). Differential social perception and attribution of intergroup violence: Testing the lower limits of stereotyping of Blacks. *Journal of Personality and Social Psychology*, 34, 590-598.
- Gilovich, T. (1991). How we know what isn't so: The fallibility of human reasoning in everyday life. New York: Free Press.
- Hamilton, D. L. & Rose, T. L. (1980). Illusory correlation and the maintenance of stereotypic beliefs. *Journal of Personality and Social Psychology*, 39, 832-845.
- Hastorf, A. H. & Cantril, H. (1954). They saw a game: a case study. *Journal of Abnormal and Social Psychology*, 49, 129-134.
- Howard-Pitney, B., Borgida, E. & Omoto, A. M. (1986). Personal involvement: An examination of processing differences. *Social Cognition*, 4, 39-57.
- Jacobs, J. E. & Eccles, J. S. (1992). The impact of mothers' gender-role stereotypic beliefs on mothers' and children's ability perceptions. *Journal of Personality and Social Psychology*, 63, 932-944.

- Judd, C. M., & McClelland, G. H. (1989). *Data analysis: A model-comparison approach*. Orlando, FL: Harcourt Brace Janovich.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford: Stanford University Press.
- Liberman, A. & Chaiken, S. (1992). Defensive processing of personally relevant health messages. *Personality and Social Psychology Bulletin*, 18, 669-679.
- Lord, C. G., Ross, L. & Lepper, M. R. (1979). Biased assimilation and attitude polarization: The effects of prior theories on subsequently considered evidence. *Journal of Personality and Social Psychology*, 37, 2098-2109.
- Munro, G. D. & Ditto, P. H. (1997). Biased assimilation, attitude polarization, and affect in reactions to stereotype-relevant scientific information. *Personality and Social Psychology Bulletin*, 23, 636-653.
- Pomerantz, E. M., Chaiken, S., & Tordesillas, R. S. (1995). Attitude strength and resistance processes. *Journal of Personality and Social Psychology*, 69, 408-419.
- Reed, M. B. & Aspinwall, L. G. (1998). Self-affirmation reduces biased processing of health risk-information. *Motivation and Emotion*, 22, 99-131.
- Ross, L. & Lepper, M. R. (1980). The perseverance of beliefs: Empirical and normative considerations. In R. A. Sweder & D. Fiske (Eds.), *New directions for methodology of behavioral science: Fallible judgement in behavioral research*. San Francisco: Jossey-Bass.

- Ross, L. & Ward, A. (1995). Naive realism: Implications for misunderstanding and divergent perceptions of fairness and bias. In T. Brown, E. Reed, & E. Turiel (Eds.), *Values and knowledge*. Hillsdale, NJ: Lawrence Erlbaum.
- Steele, C. M. (1988). The psychology of self-affirmation: Sustaining the integrity of the self. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 21, pp. 261-302). New York: Academic Press.
- Steele, C. M., Spencer, S. J. & Lynch, M. (1993). Self-image resilience and dissonance: The role of affirmational resources. *Journal of Personality and Social Psychology*, 64, 885-896.
- Vallone, R. P., Ross, L. & Lepper, M. R. (1985). The hostile media phenomenon: Biased perception of media bias in coverage of the "Beirut Massacre." *Journal of Personality and Social Psychology*, 49, 577-585.
- Zanna , M. P. (1993). Message receptivity: A new look at the old problem of open-versus closed-mindedness. In Mitchell, A. A. (Ed.), *Advertising exposure, memory, and choice*. (pp. 141-162). Hillsdale, NJ: Lawrence Erlbaum.
- Zuwerink, J. & Devine, P. G. (1996). Attitude importance and resistance to persuasion: It's not just the thought that counts. *Journal of Personality and Social Psychology*, 70, 931-944.

Figure 1

Mean Reactions to Debate

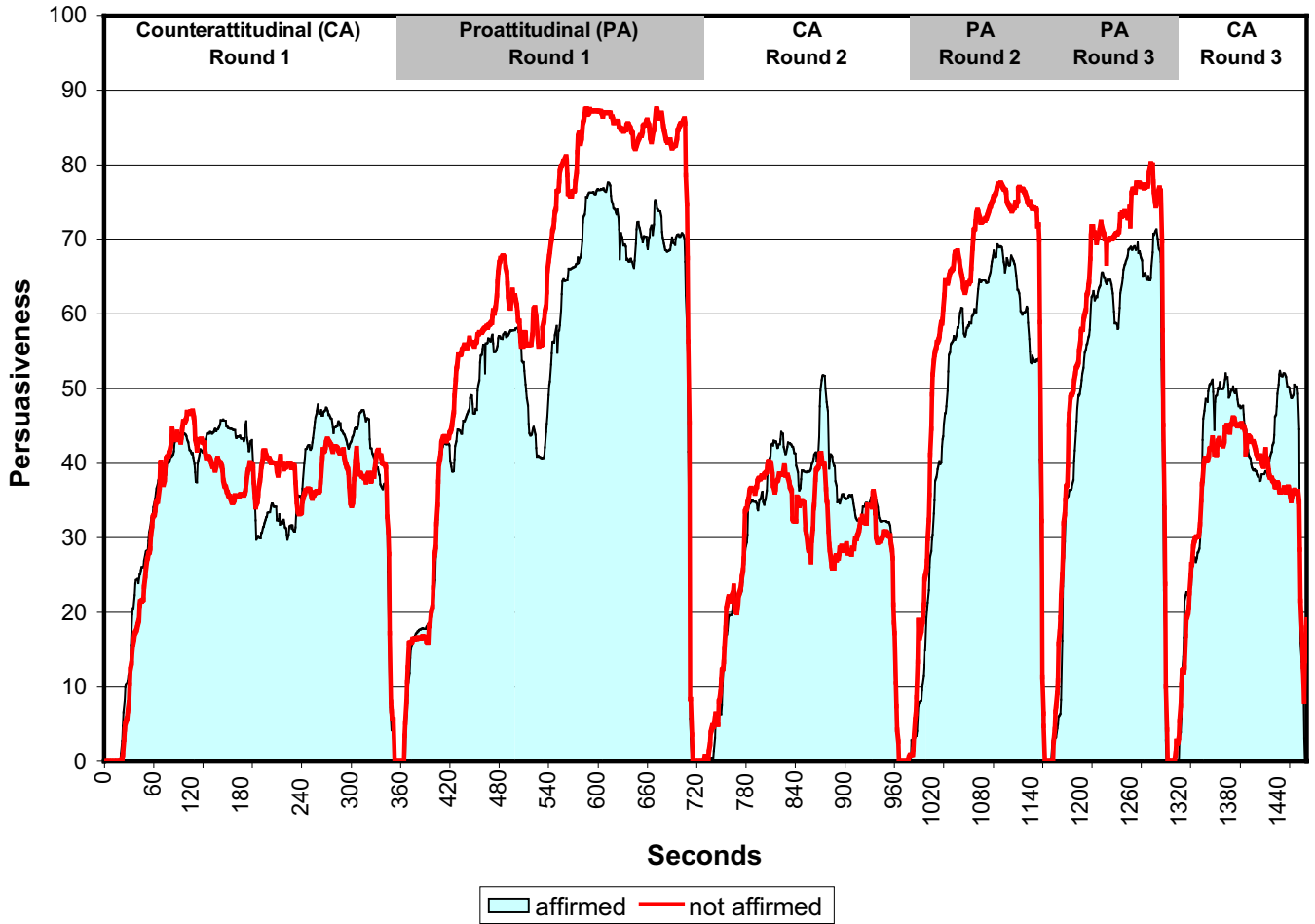


Figure 2

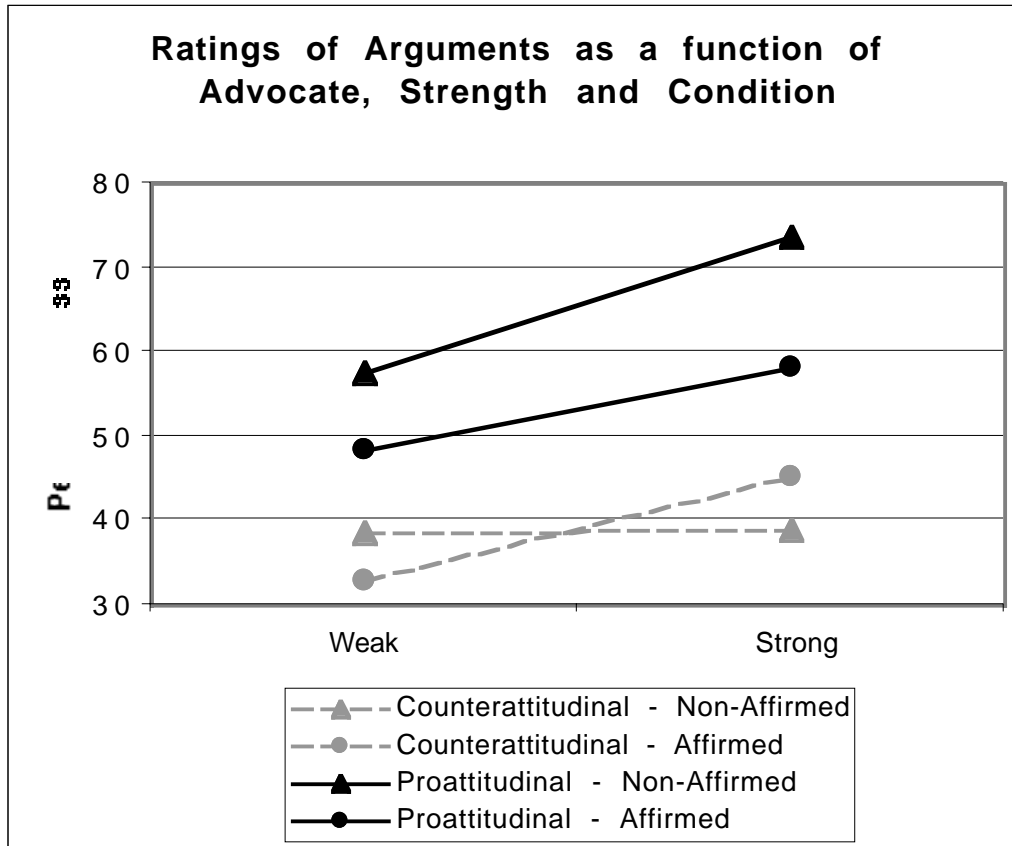


Figure 3

