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# Truth or Consequences: Overcoming Resistance to Persuasion with Positive Thinking

Blair T. Johnson

*University of Connecticut, [blair.t.johnson@uconn.edu](mailto:blair.t.johnson@uconn.edu)*

Aaron Smith-McLallen

*University of Connecticut*

Ley A. Killeya

*Rutgers University*

Kenneth D. Levin

*Remarketing Services of America*

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## Truth or Consequences: Overcoming Resistance to Persuasion with Positive Thinking

Blair T. Johnson      Aaron Smith-McLallen  
*University of Connecticut    University of Connecticut*

Ley A. Killeya      Kenneth D. Levin  
*Rutgers—The State      Remarketing Services of  
University of New Jersey    America*

*Truth or Consequences* was a popular U.S. television quiz show that melded trivia game with stunt acts. Its host asked contestants silly questions and they had to answer them correctly before “Beulah the Buzzer” sounded. Failing to provide the “Truth,” contestants faced the “Consequences,” which meant having to perform an amusing and often embarrassing stunt. Just as this program combined pursuit of the truth—simple, logical knowledge—with some related consequences—bad or good experiences—so too do everyday pressures push us to hold seemingly truthful views that maximize our gains and minimize our losses and that permit us to approach or avoid some entity. Yet, just as contestants on *Truth or Consequences* experienced the pains of too little truth, in everyday life we have suffered the consequences of basing our attitudes or our behavior on evidence that seemed good at the time but later turned bad. Gamblers play the slots, convinced the next spin will win. Golfers buy the latest, greatest products in the hopes of giving their game that elusive edge. Politicians support policies that in retrospect are based on implausible principles with little chance of succeeding. In short, we often seem to act under the premise that we can “have our cake and eat it, too.” People often leap before they look, although the reverse certainly happens as well.

Everyone, lay people and social psychologists alike, knows that “strong”

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arguments are more persuasive than "weak" arguments. If we take the strong versus weak contrast at face value, strong arguments induce persuasion but weak arguments do not. Put another way, presumably, persuaders who present cogent, rational arguments achieve the desired effect, whereas specious arguments fail to persuade. By this interpretation, weak arguments induce resistance in message recipients, who maintain their initial views and are not swayed. Yet beneath the surface, a more sophisticated interpretation is that, yes, strong arguments produce acceptance, but that weak arguments are not merely unpersuasive but actually can be *anti*-persuasive. In other words, weak arguments may sometimes move the message recipients' attitudes further away from the message position. Indeed, some research indicates that people who receive weak messages and who have a high degree of outcome-relevant involvement, a motivational state in which a person's attitude about a particular object is linked to an outcome about which they are highly concerned, demonstrate negative attitude change (Johnson & Eagly, 1989). The fact that negative attitude change, or "boomerang" effects, can occur in a relatively impersonal context presents important clues about the nature of attitudes in general and how to overcome resistance to persuasion.

In this chapter, we first synthesize data from argument quality studies that shed light not only on boomerang effects but also on the roles of message position valence and outcome-relevant involvement in persuasion. We then present experimental data exploring these effects. The basic thrust of our view is that the persuasive impact of argument quality, as it has been operationalized, is much less about logic than it is about valence. That is, persuasion is more about suggesting good rather than bad *consequences* (valence) for the message recipient than it is about creating impeccably logical—a.k.a. truthful or likely—arguments. Much of this work supports the conclusion that the valence of actively generated cognitive responses to a message underlies persuasion. When the valence of these thoughts is positive (i.e., good consequences for the message recipient) then persuasion is likely to occur, but if the thoughts are negative there is evidence of true resistance—sticking to one's guns.

### BOOMERANG VERSUS SIMPLE RESISTANCE

Although the two responses to persuasive communications discussed in this chapter, resistance and boomerang, are similar in that neither yield a positive result for the communicator, they are different in that *resistance* connotes that no meaningful change from initial attitudes appears following the reception of a message, whereas a *boomerang effect* implies significant attitudinal movement away from the message position. Traditionally, discussions of boomerang effects emerge in reference to two different frameworks. Reactance Theory and Social Judgment-Involvement (SJI) Theory. Reactance theory holds that boomerang

effects can occur if messages threaten a perceived freedom not to believe, creating movement away from the advocated position (see Fuegen & Brehm, this volume; Sherman, Crawford, & McConnell, this volume). For example, a study by Worchel and Brehm (1970) presented messages that either contained or did not contain statements such as "you cannot believe otherwise" with regard to acceptance of the communist party in the United States. Providing such threats created movement away from what actually was a pro-attitudinal position. Yet, this explanation of resistance provides a poor fit for most persuasion data, given that nearly all studies' persuasive messages have omitted such pressing interpersonal statements. In sum, the reactance explanation provides little insight into the nature of argument quality except that strong arguments should not threaten individuals' freedoms.

SJI theory holds that perceptual displacements mediate persuasion (see Eagly & Chaiken, 1993, for a review). From this perspective (e.g., M. Sherif & Hovland, 1961), a person's existing attitudes provide an interpretive context for an incoming message. When the message position falls in, or very near to, a person's latitude of acceptance, the result is an attitudinal shift toward the position; that is, the message position is *assimilated*. If the position falls in the person's latitude of rejection, the message is regarded as more distant from one's own attitude than it truly is and no attitude change occurs; that is, the message position is *contrasted*, or in terms of this volume, *resisted*. SJI theory also predicts that, for those for whom involvement is very high, very discrepant messages might result in negative attitude change, or *boomerang*. SJI theorists regard highly involving attitudes as components of the ego or self-concept, that is, as aspects of the "self-picture—intimately felt and cherished" (C. W. Sherif et al., 1965, p. vi). Johnson and Eagly (1989) labeled this construct *value-relevant involvement* to differentiate it from outcome-relevant involvement. Yet, because this chapter is primarily concerned with the effects of persuasive communication involving outcome-relevant issues, unless we indicate otherwise, we will use the term "involvement" to refer to outcome-relevant involvement.

In general, being highly involved appears to motivate people to form accurate, albeit temporary, judgments about the issue in question. For example, investigators typically inform their high-involvement participants that the message is highly relevant to their short-term goals, whereas low-involvement participants learn that the message is relevant to another group and/or another time. In a seminal study, Petty and Cacioppo (1979, Experiment 2) examined college undergraduates' reactions to what has since become the most popular issue in persuasion research, the policy whereby passing a comprehensive examination in the student's major area should be a mandatory requirement for graduation. They informed their University of Missouri participants that they would be evaluating radio editorials sent in by colleges and universities across the country. In the low-involvement condition, the speaker advocated that the exams should be instituted at North Carolina State, thereby making the editorial of little interest to participants' own educational concerns; in the high-involvement condition, the speaker advocated that the exams be instituted at their own institution in the

near future, thereby making the editorial of high interest. Recipients subsequently received either a strong or weak message in support of the message position.

Results showing that the argument quality manipulation had a much larger impact on attitudes for high- than for low-involvement provided support for one of the key predictions of the Elaboration Likelihood Model, which appeared soon thereafter. Specifically, under high message elaboration circumstances, attitudes should conform to message content (Petty & Cacioppo, 1986). Johnson and Eagly's (1989) review of 20 such studies generally confirmed this accuracy motivation: High (vs. low) outcome-relevant involvement promoted greater persuasion with strong arguments and generally promoted less persuasion with weak arguments. Although Petty et al. (1981) discussed the possibility that some of their weak-argument data may have reflected boomerang effects, this phenomenon has since then received little attention (for an interesting exception, see Zanna, 1994).

In sum, the foregoing literature further informs the nature of *resistance*, which we define as no attitude change in response to a message. People may resist persuasive attempts for a variety of reasons. Under conditions of low involvement, resistance may result from decreased motivation to cognitively engage with the issue and the arguments presented. When involvement is high, in contrast, resistance may be due to active counterarguing against the message content, in which case resistance implies the presence of a very persistent attitude that has stood a significant test (see Jacks & O'Brien, this volume). Additionally, people may resist persuasive messages because acceptance of a new position may require more cognitive restructuring than the person is willing to undergo (see Festinger, 1957). Our definition of resistance assumes that the target of the persuasive message actively receives the message, thereby ensuring that some amount of force was applied that could either be resisted or could produce attitudinal change. As the data presented in this chapter resulted from participants who actively received a message, observations of resistance cannot be explained by simple cognitive inertia.

### META-ANALYSIS OF ACTUAL ATTITUDE CHANGE IN RESPONSE TO STRONG OR WEAK ARGUMENTS

That strong arguments are persuasive and that this pattern peaks under high involvement seem straightforward enough; what happens in relation to weak arguments is more complex. Message recipients under weak argument conditions face a potentially interesting dilemma: The message position suggests a conclusion at odds with its supposed supportive content. For example, suppose the weak version of an argument in favor of instituting comprehensive examinations is "the risk of failing the exam is a challenge most students would welcome"

(e.g., Petty, Harkins, & Williams, 1980, Experiment 2). From the student participants' perspective, outcomes implied by this argument are plausibly negative (failing the exam, facing a new challenge), thus more logically supporting the reverse conclusion that comprehensives should *not* be instituted. The conflict between message position and message content faced by recipients of weak arguments might not be easily resolved without heightened motivation (and requisite ability) to think about the problem. Thus, increased involvement may be the key to pushing recipients to the message position logically implied by the message content that comprehensive exams are good, assuming recipients have the ability to do so. In contrast to these predictions having to do with counter-attitudinal message positions, under pro-attitudinal message position conditions, the negative valence implicit in weak arguments should prove less problematical to message recipients, who can, with sufficient motivation, generate their own attitude-supportive cognitive responses. Thus, consistent with our valence hypothesis, we anticipated showing fairly robust actual change in favor of a pro-attitudinal message position despite variations in the manipulated quality of supportive arguments, perhaps even heightened by increased involvement. Finally, under conditions of low involvement, we anticipated smaller argument quality-related changes.

If weak arguments actually have negative valence for the message recipient, then we should see that they tend to produce negative attitude change, despite a message position that requests change in the opposite direction. What is needed to assess such a question are measures of *actual* attitude change rather than post-test-only comparisons between strong and weak arguments. Unfortunately, studies in the argument quality literature almost never assess actual change by comparisons to baseline opinions or to a no-message control group. Yet, despite the size of this literature, we were able to address some important questions (for more details, see Johnson & Smith-McLallen, 2003).

We used a three-tiered strategy to locate our sample of studies. First, we conducted computer-based information searches in the PsycINFO (1967 to 2002) database using various combinations of the key words *argument quality*, *argument strength*, *no message*, *control group*, *pretest*, *pretest-posttest*, or *attitude change*. Next, an electronic request for articles that met our inclusion criteria was also posted on the Society for Personality and Social Psychology (SPSP) listserv. Finally, we reviewed the reference lists of numerous articles that were procured as a result of these searches. We included studies if: (a) they had both strong and weak arguments, as labeled by the researchers; (b) they included either a no-message control group, or in the case of within subjects designs, pretest and post-communication attitude measures toward the subject of the persuasive communication; and (c) they reported statistics from which effect sizes could be derived. Because such studies are difficult to locate based simply on their abstracts, which tend to omit such details, we obtained any study that had "argument quality" or "argument strength" in its abstract and then searched the document to determine whether the criteria were satisfied.

We excluded studies or portions of studies that created situations that do not

well characterize this literature. For example, we excluded one case of experimentally induced high knowledge, but retained the low-knowledge control conditions (Johnson, 1994). Similarly, we excluded experimentally induced high fear, but retained the low-fear control condition (Smith, 1977). Only those studies meeting the inclusion criteria that were obtained by October, 2002, were included. Three of the studies (Friedrich, Fetherstonhaugh, Casey, & Gallagher, 1996; Johnson, 1994; Petty et al., 1981) used the modal persuasive issue in the literature, comprehensive examinations as a requirement for college graduation; other studies used the issues of "bending truth in interpersonal relationships" (Neimeyer et al., 1991), candidates for local political offices (Greer, 1996), government controls to minimize effects of acid rain (Lin, 1994), and unconditional amnesty for the Vietnam draft (Smith, 1977). All studies used college undergraduates as participants.

Among the dimensions that we coded from each study were low or high involvement when manipulated (in other cases, studies were labeled "other"); and whether the message position was pro- or counter-attitudinal. This latter coding was established by examining the mean attitude positions on the pretest or no-message control group: When the mean attitude toward the message position was on the negative side of the neutral point on the scale, it was regarded as counter-attitudinal; otherwise, it was pro-attitudinal.

In a separate analysis, we examined whether participants' ratings of these argument sets justified the labels of "strong" versus "weak." The mean argument ratings and standard deviations robustly justified scholars' labels of "strong" and "weak" for their sets of relatively strong or relatively weak arguments, and there were no deviations attributable to studies' use of a pro- versus counter-attitudinal message position or to use of high- or low-involvement conditions.

The effect sizes we used in this integration evaluated actual attitude change resulting from message exposure. The mean attitude for the strong or weak message condition was compared against the mean attitudes at pretest or in a no-message control group; this difference was divided by the pooled standard deviation or the standard deviation of the paired comparisons, respectively (see Johnson & Eagly, 2000). The *g*-values were translated into *d*-values by correcting them for bias that results from smaller samples. In studies that manipulated involvement (Johnson, 1994; Lin, 1994; Petty, Cacioppo, & Goldman, 1981) we calculated four separate effect sizes (i.e., high involvement/strong, high involvement/weak, low involvement/strong, low involvement/weak). The six experiments included in these three studies yielded 18 different comparisons, each of which was treated as a separate study in analyses. Analyses used conventional fixed-effects meta-analysis assumptions (see Johnson & Eagly, 2000).

First consider the results from pro-attitudinal message position studies, which Fig. 11.1's two left-most bars show. Despite the fact that these recipients perceived the strong arguments to be stronger than the weak arguments, the two versions produced a statistically identical amount of attitude change and in both cases the movement was statistically significant in the direction of greater ac-

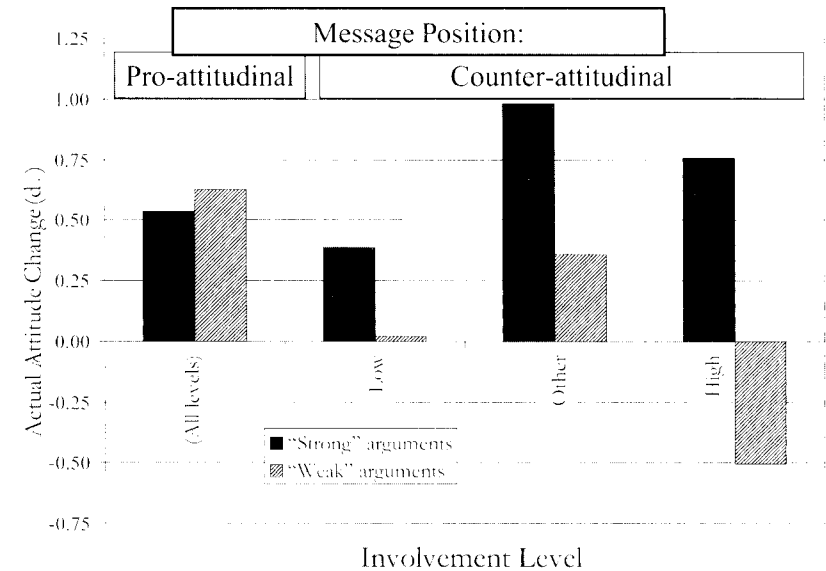


FIG. 11.1. Weighted mean effect sizes summarizing actual attitude change brought about in studies using "strong" (the darkened left bar within each cluster) and "weak" arguments (right bar in each cluster) with pro-attitudinal (left most pair) or counter-attitudinal (three right pairs) message positions. Counter-attitudinal studies are further divided by whether participants had low, other (i.e., no manipulation of involvement), or high outcome-relevant involvement (OR) with message. (There was no impact of involvement within pro-attitudinal studies.)

ceptance of the message position. Moreover, the level of involvement induced within these studies had no relation to these results. Thus, it would appear that recipients of messages espousing pro-attitudinal positions find their own ways to support movement in the direction of the message, even if the accompanying arguments seem of poor quality.

The remaining bars in Fig. 11.1 show the varied role that argument quality played for the studies that used messages with counter-attitudinal positions, divided for whether involvement was manipulated to be low or high, or not varied ("other"). As a generalization across all of these comparisons, strong messages were significantly more persuasive than their weak counterparts and weak tended to be associated with resistance rather than boomerang. Yet this tendency for strong arguments to effect greater change than weak arguments depended on level of involvement, as the figure shows. Argument quality had no reliable impact when involvement was low (second pair of bars), but it had a significant

impact when involvement was left unaltered or was high (see last two pairs of bars). Indeed, the last pair of bars in Fig. 11.1 illustrate the expected pattern of results for high involvement: Strong arguments elicited more and positive persuasion compared to weak arguments effect, which was directionally opposed. Both means differed significantly from zero, implying persuasion in the first case and the expected boomerang effect in the second. Finally, note that the amount of actual change elicited for highly involved recipients of counter-attitudinal message positions supported by strong arguments was statistically equivalent to that elicited for high outcome-relevant, pro-attitudinal positions. This combination of results suggests that strong counter-attitudinal messages have the same persuasive impact as pro-attitudinal communications because strong counter-attitudinal arguments are linked with positive outcomes for the recipient.

By examining *actual* rather than *relative* attitude change, this study afforded tighter generalizations about resistance or acceptance of a message in the face of identifiable message conditions. Our results suggest that people do not resist pro-attitudinal messages, just as they do not resist spontaneous self-generated positive thoughts. Indeed, these data confirm with different methods, a result shown experimentally by Killeya and Johnson (1998), that the negative impact of weak arguments can be overcome with convincing instructions to think only positive thoughts. Our data also confirmed, with different techniques and nearly independent data, the conclusion that Johnson and Eagly (1989) reached: High (compared to low) outcome-relevant involvement creates movement toward strong arguments and away from weak arguments. The present results go further in showing that, for such message recipients, persuasion in the direction of the message occurs with strong arguments, and boomerang away from the message position occurs with weak arguments. When involvement was low, there was no hint of boomerang in the face of weak arguments; the best that can be said is that these message recipients perhaps lacked the motivation to change their attitudes and resisted persuasion.

The actual attitude change observed for highly involved participants who received strong counter-attitudinal arguments was equivalent to the change that resulted for pro-attitudinal arguments (whether strong or weak). This result is consistent with our basic thesis that valence matters more than logic and suggests that strong arguments, when broken down, may actually be disguised versions of pro-attitudinal messages. These findings suggest that argument quality—as it has been represented in the literature to date—may be a mere proxy for valence. On the face of it, the conclusion that creating positive valence is crucial to overcoming resistance may not seem earth-shattering, but our finding that the resistance to weak arguments is overcome by positive valence has an intriguing implication. To wit, perceptions of veracity—a.k.a. sheer logic about the “truth value” of the presented arguments—matter relatively little compared to perceptions of valence (Levin et al., 2000). This conclusion flies in the face of many venerable theories, not the least of which is Fishbein’s classic (1963) formulation of attitude as  $\Sigma b \cdot e$ , the sum of salient beliefs (*b*) about whether the entity

possesses a characteristic multiplied by the evaluations (*e*) of those beliefs (see also Albarracín & Wyer, 2001; McGuire & McGuire, 1991). Yet, given that our meta-analysis’s conclusions were based almost solely on persuasion outcomes, these data are ill-suited to assessing whether logicity, as assessed for example by the *b* component of the  $\Sigma b \cdot e$  equation, underlies argument quality effects. To gather this evidence, we conducted a series of experiments.

### EXPERIMENTAL EVIDENCE THAT VALENCE (USUALLY) MATTERS MORE THAN LIKELIHOOD

We conducted four studies that explicitly examined the logic that valence usually matters more than likelihood in persuasion (for more details, see Johnson, Smith-McLallen, Killeya, & Levin, 2003). Two of the studies explicitly examined whether valence or likelihood judgments are more closely related to perceptions of argument quality and the other two studies experimentally varied valence and likelihood of argumentation, examined perceptions of argument quality, and added persuasion measures; the last study also manipulated involvement.

*Experiment 1—Judgments of Argument Strength, Valence, and Likelihood.* In a fairly well-cited conference publication, Areni and Lutz (1988) were the first to question whether valence rather than likelihood may underlie argument quality’s effects. These researchers examined the perceived strength—defined as likelihood—and the valence of arguments used in prior persuasion research. To make sure that recipients focused closely on the messages, instructions asked them to spend nontrivial amounts of time carefully studying the communications. Results showed that whereas valence of arguments differentiated strong from weak, there was no difference in judgments of the likelihood value of the information in the messages. Areni and Lutz therefore concluded that strong arguments elicited valence ratings that are more predominantly good than the weak arguments, and that likelihood matters little.

Our first experiment more specifically examined this valence hypothesis. Thirty-eight college students rated 24 quite commonly used arguments supporting the adoption of senior comprehensive exams. These arguments were developed by Petty et al. (1980, p. 87), who selected arguments based on cognitive response profiles. Eight arguments that had elicited predominantly favorable thoughts were their “strong” set; eight that elicited predominately unfavorable thoughts were “weak,” and another eight that elicited even more unfavorable thoughts were “very weak.” Using 15-point scales, participants were randomly assigned to judge the arguments along one of three dimensions, *valence* (end points: very bad to very good;  $n = 13$ ), *likelihood* (very unlikely to very likely;  $n = 12$ ), or *strength* (very weak to very strong;  $n = 13$ ). We asked each group to do only one rating in order to avoid carryover effects in judgment and to simplify the task.

Collapsing over the arguments within each condition and using Petty et al.'s (1980) three a priori argument-quality conditions as a within-subjects factor and judgment condition as the between-subjects factor, a significant two-way interaction between the a priori strength group and the judgment condition emerged. "Strong" arguments were indeed seen as the strongest and the "very weak" arguments as the weakest, confirming Petty et al.'s initial argument-quality groupings in this sample. Also in line with our hypotheses, Petty et al.'s strong arguments received the highest valence ratings but the weak and very weak arguments had more negative valence. Analyses of likelihood judgments confirmed our hypothesis: The three levels of argument quality did not discriminate ratings of likelihood. More sensitive analyses using argument as the unit of analysis confirmed these findings: strength and valence correlated very highly,  $r = .81$ , whereas there was no link between strength and likelihood,  $r = -.08$ , and no link between valence and likelihood,  $r = .02$ . In sum, these data strongly support the conclusion that the perceived strength of arguments is strongly associated with perceived valence but not with perceived likelihood of arguments.

One might question whether the  $\Sigma b \cdot e$  logic would better predict argument quality if the  $b$  (beliefs about the argument, is it strong or weak) and  $e$  (evaluations of the argument, is it good or bad) components were combined. That is, consistent with the  $\Sigma b \cdot e$  logic, strong arguments might be those that are both good and likely, whereas weak arguments are those that are unlikely. In fact, this logic can be directly examined by regressing the mean strength judgments first on the mean valence and likelihood judgments and then on their interaction. The first step of this analysis offers the additional advantage of permitting a simultaneous assessment of both valence and likelihood's relation to argument strength judgments. This analysis confirmed the pattern reported in the preceding paragraph, with valence maintaining its impact on argument strength, but with likelihood having no relation; the interaction, added in the next step, proved nonsignificant.

That valence and strength are so tightly correlated confirms our expectation that *perceived strength* boils down to *perceived valence* of the arguments' content, consonant with Areni and Lutz's (1988) work. For practitioners in persuasion research, one implication of the close match between valence and perceived strength is that when subjects are presented with arguments differing in valence, they conceive of these differences as strength. This point has some import given that, in persuasion research, participants are often asked to rate arguments along a "strong-weak" dimension. What they may in fact implicitly be doing is rating them on a "good-bad" dimension. Since conducting this initial argument judgment study, we have obtained the same basic pattern in five more replications involving a total of four issues, two of which are "real-world" issues (e.g., U.S.-Arab relations) for which we obtained arguments from Web sites on the Internet. Across these studies, main effects of likelihood were quite rare, as were interactions of valence with likelihood. These results further suggest that when constructing persuasive messages, practitioners should not be overly concerned with

creating arguments that suggest likely consequences for the message recipient. What these data failed to contain, however, was any active persuasion effort or measurement of persuasion. Our next two studies provided such data and further tested the hypothesis that information valence is more consequential to persuasion than information likelihood.

*Experiment 2—Examining Valence and Likelihood as Factors in Persuasion.* Evidence shows that when evaluating argument strength, valence matters more than likelihood; but because these studies have focused solely on argument judgments, there is to date no evidence about attitudes *per se*. Thus, we proceeded to conduct more traditional message-based persuasion experiments in which participants received a message position supported by argumentation and then completed the usual battery of measures. We stuck with the comprehensives issue for comparability with past research and continuity with Experiment 1. Thus, we selected arguments based on the ratings from the first experiment, completing the cells of a 2 (Valence: Good vs. Bad)  $\times$  2 (Likelihood: High vs. Low) factorial. The  $\Sigma b \cdot e$  logic clearly predicts more positive attitudes in the face of good information that is likely to be true, and resistance or even boomerang in the face of bad information that is likely to be true. The unlikely combinations should be somewhere around neutral—unlikely information is a poor basis for one's attitudes.

In contrast, we expected that once again we would primarily see the valence effect in the persuasion data. Yet we also thought it likely that a "swallow-your-medicine" effect might occur with a bad but likely message. Under such circumstances, message recipients might interpret the arguments as bad-tasting medicine that must be taken in order to feel better later. With regard to the comprehensives issue, this logic implied, for example, that the tests may be stressful, but the benefit later in life may be better preparation for other competitions. Finally, we were intrigued by the combination that good but unlikely dimensions present. It is here that a "wishful thinking" effect may occur, such that although the arguments are unlikely to be true, the effects would be beneficial (cf. McGuire & McGuire, 1991; Albarracín & Wyer, 2001).

Participants were told that they would "be asked to read a short editorial on an important educational topic and to complete a series of scales and questions about the message." To maximize message scrutiny, the experimental booklet (falsely) stated that participants would later have to recall the arguments they read. The messages implied that the message was germane in an outcome-relevant fashion: The message position, which appeared at the beginning and the end of the message, was that "seniors at *this* university should be required to take a comprehensive examination in their major area as a requirement for graduation" (*italics added*). By heightening involvement for all participants, the research offered the possibility of addressing Areni and Lutz's (1988) speculation that likelihood plays a bigger role as elaboration likelihood increases.

Following were arguments that varied in *likelihood*, the chances that the stated consequences or antecedents are actually related to the argument, and *valence*, whether the consequences are genuinely desirable. Examples of the arguments follow:

*Good/likely*: Prestigious universities have comprehensive exams to maintain academic excellence.

*Good/unlikely*: Schools with comprehensive exams attract larger and more well-known corporations to recruit students for jobs.

*Bad/likely*: The difficulty of the exams will prepare one for later competitions in life.

*Bad/unlikely*: The risk of failing the exam is a challenge that most students would welcome.

These arguments were selected based on the ratings obtained in Study 1 and appeared in somewhat elaborated form along with another argument. After reading the message, participants rated their attitudes, engaged in a thought-listing task, and completed a series of ratings, including rating the arguments they had seen on their strength, likelihood and valence, with each of the two arguments they had seen rated separately.

As Fig. 11.2 illustrates, we found that good arguments were persuasive whether they were likely or unlikely, but bad arguments were persuasive only when they were judged as likely. Interestingly, only when arguments were both unlikely and bad was the mean attitude on the negative side of the midpoint, which is somewhat supportive of Areni and Lutz's (1988) speculation that under greater elaboration likelihood, argument likelihood can matter. Although we suspect that this pattern represents a boomerang effect, we cannot say with certainty in the absence of a measure of actual change. The fact that bad arguments can persuade when they are also likely does suggest a "bad-tasting medicine" effect: To wit, individuals may swallow the medicine given the knowledge that although the short-term effects may be bitter—that is, bad—the long-term effects will be far better. The rest of the persuasion pattern fails to support Areni and Lutz's speculation. Unlikely-but-good arguments were equally as persuasive as likely-and-good arguments. In short, a wishful-thinking effect emerged, despite relatively high elaboration likelihood.

We were especially intrigued by Experiment 2's demonstration that valence matters even for arguments that are unlikely to be true (as judged by the participants' peers) and we wished to explore possible boundary conditions of this valence effect. In particular, given that the valence effect occurred in the face of relatively high involvement with the issue, it was possible that it might not occur for participants with very low involvement, consistent with past demon-

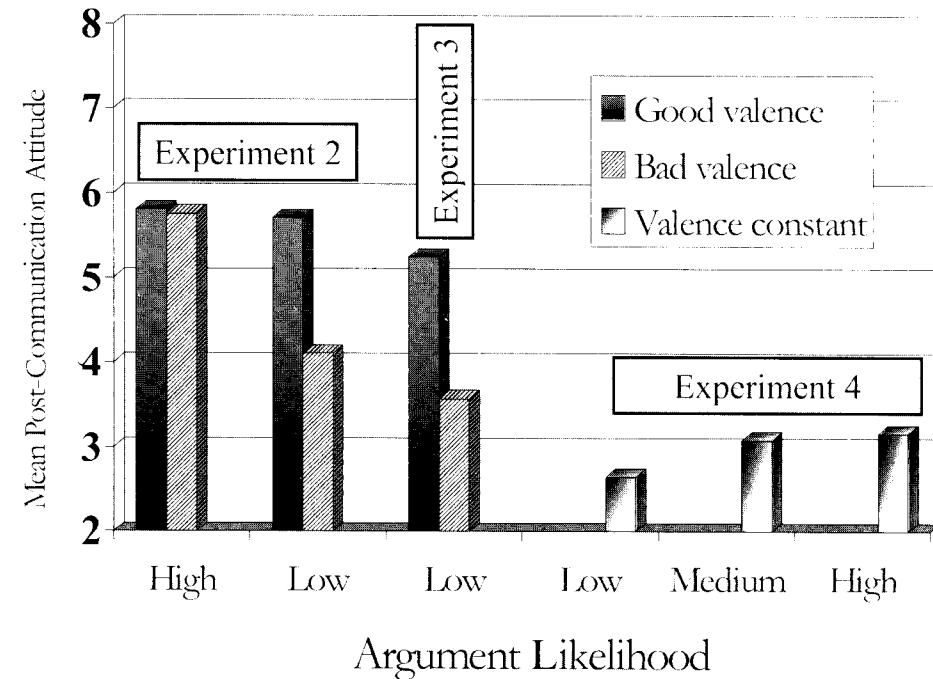


FIG. 11.2. Mean post-communication attitudes as a function of argument likelihood likely vs. unlikely to be true and/or valence good vs. bad. Experiment 2 had both factors; Experiment 3's data reflect only valence, as only the unlikely, good vs. bad pairing was used; Experiment 4's data reflect only likelihood, with valence constant.

strations of extent of processing  $\times$  AQ interactions (e.g., Johnson, 1994; Killea & Johnson, 1998; Petty & Cacioppo, 1979). In contrast, participants with very low involvement might actually process the arguments by using a valence heuristic, resulting in persuasion similar to that for high involvement.

#### *Experiment 3—Bad Versus Good Yet Unlikely Arguments.*

Thus, Experiment 3 manipulated involvement, argument valence, and communicator credibility ( $N = 167$ ). The persuasive messages were the unlikely, good versus bad, versions that appeared in Experiment 2; other methodological details also paralleled that study. Despite our evidence that our manipulations of involvement and credibility worked, the attitude data revealed no significant main effects or interactions involving these variables. The only significant effect was, again, the main effect of argument valence on attitudes such that good arguments elicited more positive attitudes than bad arguments. We conducted a path analysis to examine whether valence matters more than likelihood—in persuasion; in so doing we also examined processes plausibly associated with persuasion due to our strong arguments or resistance to persuasion due to weak



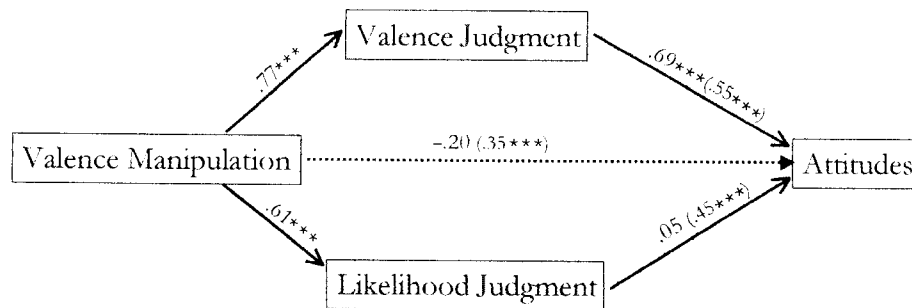


FIG. 11.3. This path analysis shows that the effect of argument valence on attitudes is completely mediated by judgments of valence (but not likelihood) of the arguments received (Experiment 3). (Values in parentheses are zero-order correlations.) \*\*\* $p < .001$ .

arguments. As Fig 11.3 indicates, the valence manipulation affected both the ratings of argument valence and of argument likelihood, and it had a direct influence on attitudes. Although the arguments were preselected not to vary on likelihood, "good" arguments were still judged to be more *likely* than were "bad" arguments, which is correlational evidence of the same wishful-thinking effect that first emerged in Experiment 2. Controlling for the effects of argument ratings, the valence manipulations had no significant direct impact on attitudes. Instead, the persuasive impact of the valence manipulations was entirely carried by judgments of argument valence. Moreover, when added to the equation, the term for the valence of participants' thoughts proved nonsignificant in Experiment 3. As in Experiment 1, we also tested the combinatorial hypothesis that the interaction of the ratings of valence and likelihood mediates the effects of the valence manipulation on attitudes, but this term proved nonsignificant. Thus, the argument valence hypothesis again received the lion's share of support, although these data suggest that likelihood *can* play a role in persuasion.

**Experiment 4—Varying Argument Likelihood Using a New Issue.** Having shown robust valence effects across the first three experiments and only small likelihood effects, we decided a conceptual replication was in order in a potentially stronger attempt to show that argument likelihood can matter for persuasion. We selected another commonly used issue, tuition increases, and pretested arguments to vary from low to high likelihood of being true while remaining relatively constant on valence. Briefly, arguments were that an increase in tuition could be used "to provide course-related supplies. . . and private bathrooms in every dorm room" (low likelihood), "to build underground tunnels for use during bad weather. . . and to provide a subsidized taxi service to students" (moderate), and "to hire more faculty. . . and to improve the quality and variety of food offered the dining halls" (high). We also varied

communicator credibility orthogonally in the factorial design for our college undergraduate participants ( $N = 107$ ). The only significant effect was a main effect for communicator credibility. Similar to results in the first two experiments, no significant likelihood effect emerged in analyses ( $F < 1$ ; see last cluster in Fig. 11.2).

## CONCLUSION

The studies in this chapter provide some insight into the potential roles of truth and consequences in persuasion. Our first study, the meta-analysis, examined the role of the valence of the message content and the message position as vital components in the recipe that creates strong or weak arguments. This recipe suggests that people will agree with message positions and message content that align with their prior attitudes. Consequently, counter-attitudinal message positions supported by "strong" arguments—viz, arguments that are positively valenced and therefore support initial attitudes—do indeed create persuasion. These patterns are, in the main, heightened by increasing outcome-relevant involvement, which presumably increases the motive to hold an accurate opinion about the issue. Messages fail to persuade when they present counter-attitudinal message positions supported by arguments that are weak—viz, arguments that are negatively valenced and therefore do not support initial attitudes. Such messages appear to create resistance for recipients with little motivation to process the message accurately and boomerang for those who do. Yet in consonance with social judgment-involvement theorists, we would offer the caveat that message position should matter more for individuals whose value-relevant involvement is high (cf. Johnson & Eagly, 1989; Johnson et al., 1995). The reviewed studies tended to examine relatively trivial issues as opposed to issues that may be more likely to tap into aspects of the self-picture, intimately felt and cherished. We suspect that actual attitude change for individuals with such involvements would show much greater resistance than that shown in the reviewed studies.

The four experiments we presented attempted to add to this picture by examining valence and likelihood of the arguments in two ways. One way simply compared judgments of arguments along valence and likelihood dimensions to determine which dimension best correlates with rated argument strength. In the main these data support a unitary view whereby valence is more closely related to argument strength than likelihood. The other way we examined valence and likelihood is by composing messages that varied on these dimensions, by examining persuasion patterns in response to these messages, and by determining whether these patterns were more plausibly explained by ratings of argument valence or likelihood. Across these experiments, the lion's share of data supported the conclusion of the judgment studies: Valence matters more than likelihood. Across the experiments, the interaction between valence and likelihood ratings played no role. Quite simply, good arguments imply approach and bad

arguments imply avoidance. In Knowles and Linn's (this volume) terms, good arguments are the Alpha and bad arguments are the Omega.

If argument "strength" mainly boils down to argument "valence," does it challenge contemporary theories of persuasion? In fact, as Eagly and Chaiken (1993) discussed, renaming "argument quality" or "argument strength" effects "argument valence" effects may actually better match Petty and Cacioppo's assertion (e.g., 1986) that the *valence* of cognitive responses underlies persuasion. Note that researchers in this tradition rarely if ever pretest the arguments to show differing profiles of likelihood: the focus is almost always to develop "strong" arguments that elicit relatively favorable thoughts and "weak" arguments that elicit relatively unfavorable thoughts. Numerous studies have shown correlationally that the valence of cognitive responses listed after or during the message relates to post-communication attitudes (e.g., Johnson, 1994; Petty & Cacioppo, 1979), and Killea and Johnson (1998) provided causal evidence of this effect. These researchers found that participants who were led spontaneously by their experimental instructions to think positively about a message were persuaded, even in the face of weak arguments. Thus, the resistance due to weak argumentation was overcome, with participants apparently self-persuading themselves to believe a specious message. Other participants who were not induced to think positively found the same message anti-persuasive.

More theoretical support for a valence interpretation of argument strength is suggested by research in other domains. Early evolution may well have favored a neural valence mechanism whereby organisms could swiftly determine whether to approach or avoid stimuli encountered in the environment, which needed only to be correct (likely) most of the time in order to become part of the genome. In contrast, a likelihood mechanism, if it were indeed a slower entity than the valence mechanism, would have been a more recent and more cerebral evolutionary development. If so, we should see that valence of the arguments is more correlated with argument strength for attitude entities that are known to be heritable, compared with those that are less heritable (see Tesser, 1993). Partially consistent with this perspective, Bargh, Chaiken, Gendler, and Pratto (1992) found pervasive evidence across a large number of attitudes that even weakly held attitudes are automatically activated on the appearance of a prime. If attitudes have automatic evaluations, then it is plausible that the *e* components of attitudes are more salient than the *b* components. Yet to our knowledge, no one has directly tested this implication (see Pratto, 1994, for a review). Similarly, research on implicit attitudes suggests that automatically activated attitudes can be predictive of behavior (e.g., Marsh, Johnson, & Scott-Sheldon, 2001). Perhaps the most relevant evidence derives from person perception research. Following a dual-process model perspective, Gilbert and Malone (1995) reviewed research on the correspondence bias in person perception and supported a model whereby people first make internal attributions about a behavior, later correcting that attribution if they have sufficient ability and motivation to do so. Gilbert's (e.g., 1991) more general perspective on the process of belief suggests that at the time of comprehension, propositions are be-

lieved as true; only after this initial and swift acceptance are propositions "unaccepted" or "certified." Yet it is unclear how this swift process would be evidenced in the persuasion context, where persons encounter many different propositions in the context of a single message.

Despite the bulk of evidence here favoring valence over likelihood as determining argument quality and persuasion, there are reasons to suspect that likelihood *can* play a role in defining argument strength and affecting attitudes, in consonance with the  $\Sigma b \cdot e$  interpretation of attitude. For example, scientists are admonished and trained to pursue the truth (regardless of its consequences for their selves). Parents chronically judge whether their children are likely to be harmed by a potential situation and take action to prevent it. In the current studies, Experiment 2's bad but unlikely arguments were the least persuasive for our participants, who had a relatively high level of involvement with the issue. Possibly greater support for likelihood effects would be found if the arguments defined a greater range of likelihood values. Indeed, because of the subjective nature of the matter, arguments rarely have absolutely no truth value. It has been shown that message recipients may support their post-exposure attitudes with likelihood judgments that are not explicitly addressed by the message (e.g., Albarracín & Wyer, 2001). Similarly, Wegener, Petty, and Klein (1994) conducted two mood and persuasion studies in which participants' judgments of argument likelihood but not desirability were linked to attitudes. Because their studies' participants were in either happy or sad mood states and read only strong arguments, it is difficult to compare these results to the current research, which left mood unaltered and examined manipulations of argument quality.

The current research also did not explore some other conditions that may enhance the chances of finding likelihood effects, and here we point to mood and expertise. Individuals in positive moods should be more likely to follow affective valence in their judgments (the current valence manipulation) whereas those in negative moods should disregard valence in favor of sheer likelihood. For example, Gaspar and Clore (2002) found that people in happier moods tended to focus on the forest whereas those in sadder moods tended to focus on the trees. Indeed, Wegener et al.'s (1994) research found that positive moods infuse strong arguments with higher likelihood and negative moods with lower likelihood. Similarly, participants' expertise on the issue may well heighten the role of argument likelihood. Knowledge gains can decrease the impact of argument quality as it has typically been manipulated (Johnson, 1994); the implication is that valence should matter less and likelihood more for recipients with greater expertise. These expertise and mood explanations are deserving of further study because they could help to define the boundary conditions of valence and likelihood effects.

In closing, persuaders naturally need strong arguments in order to overcome resistance, but the question is how to achieve strong arguments and avoid weak arguments. The current research suggests that, generally speaking, formulating messages so as to suggest positive consequences to the recipients, or creating a

motivational set that creates positive thinking about the message position, is far more important than making veridical statements. In short, persuasion results from the good and resistance from the bad. In subjective domains of communication and persuasion, the truth matters little when the consequences are clearly good or bad. Sound good?

## AUTHOR NOTE

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