Majority and Minority Influence: Source–Position Imbalance as a Determinant of Message Scrutiny

Sara M. Baker and Richard E. Petty

Two experiments addressed the issue of whether endorsement of a position by a numerical majority or a minority leads to greater scrutiny of the information presented in a persuasive message. In Experiment 1, a counterattitudinal position was endorsed by a majority or a minority and was supported by strong or weak arguments. Argument quality had a larger impact on attitudes with majority than with minority endorsement. In Experiment 2, a proattitudinal or a counterattitudinal message was endorsed by a majority or a minority and was supported by strong or weak arguments. When the source and message position were unexpected (i.e., majority-counter and minority-pro messages), argument quality had a larger impact on attitudes than when the source and message position were expected (i.e., majority-pro and minority-counter messages). Thus, either majority or minority endorsement can enhance message scrutiny if the source-position pairing is surprising.

It would be comforting to believe that the attitudes and beliefs we have about the world are in some sense “correct.” However, an underlying feature of an attitude is that it is subjective. There is no objective way of assessing the correctness of an attitude. Nevertheless, people can seek out or receive information about the validity of their attitudes from the social environment. Festinger (1954), in his Social Comparison Theory, suggested that people evaluate the correctness of their attitudes by looking to other people’s opinions. For example, if people want to identify with the correct position, and the extent of popular support is viewed as an indication of correctness, people should be more easily influenced when a majority rather than a minority endorses a particular viewpoint (e.g., Asch, 1956).

However, there are both conceptual and empirical support for either majorities or minorities exerting greater influence. This debate is represented by two dominant perspectives that stem from very different research traditions. The dominant view in North American social psychology has favored majority influence (e.g., Asch, 1956; Latane & Wolf, 1981; Tanford & Penrod, 1984), whereas the European perspective has favored minority influence (e.g., Maass & Clark, 1984; Moscovici, 1985; Mugny & Perez, 1991; Nemeth, 1986).

Processes Underlying Majority and Minority Influence

Several explanations have been suggested to account for majority influence. First, as noted above, majorities can provide information about correctness in ambiguous or complex social situations (Deutsch & Gerard, 1955). Alternatively, the majority is often in control of rewards, such as social acceptance and material benefits, and might exert influence for this reason (Deutsch & Gerard, 1955). Also, people might be motivated to identify with or see themselves as similar to the majority (Kelman, 1958; Levine & Ranelli, 1978; Mugny & Perez, 1991) because identification with the majority offers the perception of greater status or greater power (Moscovici, 1980; Mugny & Perez, 1991). These reasons suggest an influence advantage for majorities.

In contrast to this view, since Moscovici (e.g., 1980) proposed his provocative conversion theory, the dominant perspective in European social psychology has been on dual process models in which minorities produce greater influence than majorities, at least in terms of an enduring change in private beliefs. Conversion theory accepts the notion that judgments made in the public presence of the majority will be subject to majority influence. This is because people view the majority as offering social
reality, or people are concerned about the immediate consequences of deviating from the majority (Mugny & Perez, 1991). However, public compliance with the majority may have little impact on a person's true attitude. True change is more likely to occur, Moscovici argued, when people are confronted with a discrepant message from a minority. In this situation, people consider what the minority position is to understand why the minority would be willing to deviate. In other words, people process the message advocated by the minority, trying to understand what the minority is saying and why. This message processing can lead to conversion to the minority position, rather than simple compliance (see Kelman, 1958, for additional discussion of compliance vs. internalized change). 1

Because of the divergent American and European perspectives, researchers investigating majority and minority influence have been debating two general questions for decades. The first question concerns whether the majority or the minority is more influential (e.g., Latané & Wolf, 1981). The second question concerns whether the influence produced by majorities and minorities is due to a single process (e.g., Kruglanski & Mackie, 1991; Latané & Wolf, 1981) or dual processes (e.g., Maass & Clark, 1983; Moscovici, 1980; Nemeth, 1986). In a recent critical review of the majority/minority influence literature, Kruglanski and Mackie (1991) argued that with respect to these questions, the evidence is inconclusive. This is likely due in part to the many ways in which majorities and minorities have been operationalized and the number of dimensions on which the persuasion context has differed across these studies. Because of the many differences between studies, it is difficult to draw inferences about the psychological processes underlying the different effects observed (see also reviews by Levine & Russo, 1987; Maass & Clark, 1984; Maass, West, & Cialdini, 1987; Wood, Lundgren, Ouellette, Busceme, & Blackstone, in press).

The focus of the current research is on the specific question of whether majority or minority sources induce greater scrutiny of the issue-relevant information they present. A few recent studies have addressed this issue. Some of this research has suggested, consistent with Moscovici's (1980) notions, that processing the substance of the message is a more important factor in producing persuasion for minority than majority sources (Maass & Clark, 1983). Other research, however, suggests that processing message content is a more important determinant of attitudes for majority than minority sources (Mackie, 1987).

Maass and Clark (1983), for example, examined the extent to which message-relevant thoughts predicted attitudes to make inferences about the extent of message processing (see Cacioppo, Harkins, & Petty, 1981). In terms of influence, they found that minority sources induced greater attitude change than majorities when the attitude measure was taken in private. However, the reverse held when subjects believed that their attitudes would be disclosed in public. Because message-content thoughts predicted attitudes more strongly when attitudes were measured in private than in public, Maass and Clark concluded that the mediation of minority influence was more tied to an evaluation of message content than was majority influence. However, because thoughts were always measured in private, the enhanced correlation between the private thoughts and private attitudes over public ones could have resulted from the similar measurement conditions.

In research by Mackie (1987), a conclusion opposite to that of Maass and Clark (1983) was reached when both attitude and thought measurements were private. That is, across several studies, Mackie found that message-content thoughts were a better predictor of attitudes when subjects disagreed with the majority (majority influence condition) than when they disagreed with the minority (minority influence condition). However, because subjects' attitudes changed more when they disagreed with the majority than the minority, the enhanced correlation could stem at least in part from a greater range in the attitude measure in the majority influence condition.

In sum, contemporary research has reached conflicting conclusions as to whether majority or minority advocacy induces greater scrutiny of the content of a persuasive message. The contradictory evidence is based on correlating the valenced message-content thoughts generated in response to the persuasive message with postmessage attitudes. However, even if other methodological problems are put aside (e.g., range restrictions and divergent measurement conditions of thoughts and attitudes), there are potential problems with using the thought-listing technique as a sole method of assessing message processing, especially in a domain where motivation to justify a change in one's attitudes might be particularly salient. That is, subjects could be differentially motivated to generate or report thoughts that justify the attitude expressed as a function of movement toward a majority versus a minority message. In addition, some of the available studies exposed subjects to both majority and minority messages. As noted by Chaiken and Stangor (1987), there are interpretation problems introduced by this design feature in that it is not necessarily possible to conclude whether the issue-relevant thoughts generated were elicited in response to the majority or the minority message. Because of the conflict in the literature and the potential problems with reliance on the thought-listing procedure to assess the message scrutiny in-

1 Consistent with the Moscovici (1980) approach, Nemeth (1986) has developed a dual process model in the problem-solving domain. In this framework, majorities are hypothesized to inspire convergent thinking, wherein the target of influence adopts the problem-solving strategy suggested by the majority. On the other hand, minorities induce divergent thinking, in which the target of influence engages in alternative and more creative problem-solving strategies. The appropriate translation of this perspective to the persuasion domain is unclear, however. For example, divergent thinking, due to minority influence, could lead to adoption of the advocated message because the target is generating novel or creative thoughts in support of the message. Conversely, divergent thinking could lead to rejection of the persuasive message because the target is generating novel counterarguments. Supporting the target's own position. Similarly, convergent thinking due to majorities could focus on generating thoughts that support the specific position advocated by the majority rather than divergently thinking about alternative solutions. This would tend to enhance majority influence. Alternatively, convergent thinking could focus the target on specific arguments provided by the majority, whereas divergent thinking would lead targets to go beyond the arguments provided by the source. This would lead to majority influence when the arguments are strong, but not when they are weak.
duced by majority versus minority sources, we used an alternative means in the current research to examine the question of whether majority or minority endorsement enhanced message scrutiny.

Manipulating Argument Quality to Assess Message Scrutiny

A useful alternative methodology for examining the extent to which a variable influences message scrutiny was introduced by Petty, Wells, and Brock (1976) and has been used to examine current "two-route" theories of attitude change such as the Elaboration Likelihood Model (ELM; Petty & Cacioppo, 1981, 1986) and the Heuristic/Systematic Model (HSM; Chaiken, Liberman, & Eagly, 1989; Eagly & Chaiken, 1993). In brief, the ELM and HSM state that there are two routes by which attitudes can be changed. The first, or central route, occurs when people are both motivated (e.g., involved, sufficiently interested, high in need for cognition) and able (e.g., have minimal distraction and lack time constraints) to evaluate the central merits of the message. Attitude change through the central route is characterized by careful and effortful scrutiny of the content of the persuasive communication. If people respond favorably to the content of the message, attitude change will be in the direction of the advocated position, but if people respond unfavorably to the content of the message, the likelihood of attitude change will be reduced.

However, attitude change need not be based only on scrutiny of the substantive information in the message. Attitude change can also occur by a second, peripheral route. Influence by the peripheral route occurs when attitudes change because of some cue (or cues) in the persuasion environment that allow a reasonable judgment with minimal assessment of the issue-relevant arguments provided. One process by which peripheral attitude change can be achieved is by the invocation of decision heuristics (Chaiken, 1987). For example, people might reason that if so many people favor a proposal, it must be good, or if so few approve, it must be bad. Alternatively, as noted earlier, people might change more to a majority than a minority because of the process of identification (Kelman, 1958). Also, repeated association with a liked majority source (or disliked minority) might induce change through classical conditioning (e.g., Cacioppo, Marshall-Goodell, Tassinary, & Petty, 1992). Importantly, with each of these peripheral processes, attitudes change with little systematic scrutiny of the substantive issue-relevant information presented.

One important feature of the ELM is that it states that many variables can serve in multiple roles in different situations. For example, a variable such as majority or minority endorsement of a position could motivate the target of the persuasive attempt to carefully scrutinize the message, leading to persuasion through the central route. Alternatively, this variable (majority vs. minority endorsement) could serve as a simple cue to either accept or reject the advocacy, leading to persuasion through the peripheral route. In the ELM, a variable takes on these different roles in specific situations. For example, majority or minority endorsement would be most likely to function as a simple peripheral cue when other factors in the persuasion situation have already reduced the elaboration likelihood to low levels (e.g., very low relevance message and high distraction). On the other hand, minority or majority endorsement could influence the extent of thinking if no other salient features in the persuasion environment have already dictated a high or low level of elaboration (see Petty & Cacioppo, 1986, and Petty, Priester, & Wegener, 1994, for more complete discussions of the multiple roles for variables).

One way to discern the role a variable has assumed in a persuasion setting is to manipulate the quality of the arguments in the persuasive message. That is, either strong or weak arguments are provided in support of the message position. If a variable such as a majority versus a minority source serves as a positive peripheral cue, then a majority source should enhance persuasion over a minority source regardless of argument quality. If a variable increases the extent of message scrutiny (change through the central route), it should magnify the argument quality effect on attitudes such that argument quality becomes a more important determinant of persuasion in the presence of the variable than in its absence. Thus, if majority sources increase message scrutiny over minority sources, then attitudes should be more influenced by the quality of the arguments presented by majority than minority sources. The argument quality methodology has proven useful in examining the extent to which many variables influence the extent of message scrutiny or serve as simple cues (see Petty & Cacioppo, 1986, for a complete discussion of the logic of the argument quality manipulation and review of relevant studies; see also Eagly & Chaiken, 1993).

Experiment 1

In our first study, rather than relying solely on a measure of subjects' thoughts in response to a message to make inferences about the extent to which attitudes are based on message scrutiny, we varied the quality of the arguments in the communication so that we could more directly examine any differential effect of message content on attitudes under majority and minority conditions. If argument quality is varied along with majority versus minority endorsement, the following effects on attitudes are possible. First, if people are scrutinizing the message more in response to majority than minority endorsement, as Mackie's (1987) research suggests, postmessage attitudes should be more responsive to argument quality when the source is a majority than when the source is a minority. Alternatively, if people scrutinize minority messages to a greater extent than majority messages, as Maass and Clark (1983) suggest, postmessage attitudes should be more responsive to argument quality under minority than under majority advocacy.

A third possible result is that attitude change is based on some type of persuasive cue; for instance, people might reason that majorities are more likely to be correct (Chaiken, 1987; Petty & Cacioppo, 1986). If this were the case, there would be no interaction of source status and argument quality. Instead, attitudes would be generally more favorable toward the majority-advocated position regardless of argument quality. Because we were most interested in examining the extent to which majority and minority sources motivated people to base their attitudes...
on message scrutiny, we did not include any other variables in our experimental persuasion setting that are known to motivate message processing. For example, we left the personal relevance of the message ambiguous rather than informing subjects that the advocacy either definitely would or would not affect them (cf. Petty & Cacioppo, 1979; Trost, Maass, & Kenrick, 1992). This should enhance the likelihood that source status would influence the extent of thinking rather than serving in other roles (see Petty et al., 1994).

Another methodological consideration is that previous research on majority and minority influence has represented majorities and minorities in many ways. We chose to manipulate majority versus minority advocacy by manipulating the global extent of support within relevant populations, because in creating a local minority (i.e., in a particular discussion group; Maass & Clark, 1983), it does not necessarily follow that the majority or minority position in the local group is the majority or minority viewpoint in general. In addition, because prior research strongly suggests that attitudinal responses to majority and minority advocacy can differ depending on whether attitude measures are taken in public or in private (see Kruglanski & Mackie, 1991; Wood et al., in press), and because we were interested in investigating true attitude change (rather than public compliance), all responses were collected under private conditions.

In sum, in our first study, we manipulated the perceived support for a given issue (i.e., majority or minority support), along with the quality of the arguments in the message (i.e., strong or weak). We attempted to hold at a moderate level any other variables that were likely to motivate message processing (e.g., personal relevance), and we collected all measures in private. Our primary goal in the first study was to examine whether attitudes would be based more on a careful scrutiny of the message content when the message was associated with majority or minority endorsement.

**Method**

**Subjects**

The subjects were 57 volunteers from the introductory psychology course at Ohio State University who received course credit for their participation. Subjects were brought into the lab in groups of 6–8 ostensibly to evaluate the overall effectiveness of various styles of media presentations (e.g., print, television, and radio) in communicating information. The subjects were randomly assigned to the cells of a 2 (majority or minority) × 2 (argument quality: strong or weak) factorial design.

**Stimulus Materials**

To be as consistent as possible with previous research, a counterattitudinal topic of general interest to the subject population was sought. Therefore, in preparation for the experiment, several topics were pretested on an independent sample of 55 students. The present issue was selected on the basis that it was viewed moderately negatively (M = 4), on a scale anchored at 1 (very negative) and 9 (very positive), with low variance (SD = 2.22), implying that the issue was generally counterattitudinal for students in the campus community.

The focal proposal was a novel solution to the state budget crisis that was presumably under debate in the state legislature. The advocated solution was a mandatory community service program in which university students must commit 2 years of community service in exchange for maintaining current tuition rates. If students declined to participate, their tuition rates would automatically increase threefold. The persuasive message on this topic was constructed to read as a newspaper article. The first part of the message outlined the general issue by conveying information about Ohio’s budget crisis and proposals currently under debate in the state legislature to reduce spending on education. After the issue was given a background context, the minority versus majority manipulation was provided. The message finished with a series of six arguments in support of the advocated policy that were ostensibly generated by a committee of students supporting the proposed solution.

**Independent Variables**

**Manipulation of majority versus minority source status.** The proposal was framed as supported by either the majority of state residents and university students or supported by the minority of state residents and university students. The majority condition portrayed the proposal as supported by 86% of the residents of the state in a statewide poll and 78% of the students polled at the major state universities in Ohio. The minority condition conveyed support for the proposal by 18% of the state residents and 12% of the university students across the state. Information regarding the extent of support from both resident and student populations was provided to offer clear evidence as to the extent of global support for the proposal. This manipulation is a fairly common one in the literature on minority versus majority influence (e.g., Mackie, 1987; Mugny & Perez, 1991).

**Manipulation of argument quality.** Several arguments were generated that represented either strong, cogent reasons in support of mandatory community service as a proposed solution for the state fiscal crisis, or weak, specious reasons supporting the proposal. These arguments were pretested on an independent sample of 20 introductory psychology students. In the pretest, subjects’ instructions were to consider each argument carefully and write down all of the thoughts generated in response to the argument. Arguments were selected as strong if they elicited predominantly positive relative to negative thoughts by the majority of subjects and selected as weak if they elicited predominantly negative relative to positive thoughts by the majority of subjects (see Petty & Cacioppo, 1986).

As an example, the essence of one strong argument was “the performance of community services will provide students with hands-on direct experience and training and career opportunities in the domains of their chosen majors . . . .” In brief, the other strong arguments consisted of benefits to the community as a whole, citing the vast number of desirable programs that fail to receive funding in times of economic hardship and educational and social benefits to students who participate in the program. The essence of one weak argument was “mandatory community service will also provide students with a better opportunity to learn the streets and neighborhoods of the local communities outside the university.” Other weak arguments were focused on educational and social benefits to students, but the benefits also implied that participation would reduce decisions concerning various leisure time activities because students would be busy working.

**Procedure**

Subjects were told that they would be evaluating the effectiveness of media presentations in communicating information to the public and that they were randomly assigned to read an article that was taken from the local media on an issue of interest to the campus community. The article, in fact, was the persuasive message. It was explained that the article had been retyped to mask the media source. Subjects were given
as much time as they needed to read the article and were instructed to signal the experimenter when they were finished. When a subject signaled completion, the experimenter collected the article and passed out a booklet that contained all of the dependent measures. Subjects proceeded through the booklet at their own pace, and on completing the measures, they were debriefed and thanked for their participation.

**Dependent Measures**

Consistent with the cover story, subjects were informed that to evaluate the effectiveness of the media presentation, it was important to first assess their attitudes toward the issue "because one's opinions about issues raised by the media presentation may influence one's evaluation." Subjects responded to a series of 9-point semantic differential scales (i.e., bad-good, foolish-wise, negative-positive, beneficial-harmful, effective-ineffective, and convincing-unconvincing) regarding the proposal of "committing 2 years of mandatory community service in exchange for tuition reimbursement."

Following this, subjects completed several ancillary measures that were consistent with the cover story (e.g., "How informative was the media presentation?"). Questions assessed the effectiveness of the manipulation of majority and minority status, and a thought-listing measure. The manipulation check for status asked "how many people in the state support this issue" and "how many students support this issue." Subjects' responses to these questions were made by circling the percentage on a scale closest to that which they were told, from 0% to 100%, in 5% increments. The thought-listing task asked subjects to list all of the thoughts that they generated while reading the article. Immediately after listing thoughts, subjects were instructed to go back and code their thoughts as to whether they were positive, negative, or neutral with respect to the message (see Petty & Cacioppo, 1986). The final question asked subjects to recall as many arguments as they could from the message.

**Results**

**Manipulation Check of Majority and Minority Advocacy**

Responses to all of the measures were entered into 2 (source: majority or minority) \( \times \) 2 (argument quality: strong or weak) analyses of variance (ANOVAs). On the source-manipulation checks, there were significant main effects for source on the items concerning the degree of support in the state population, \( F(1, 54) = 30.13, p < .0001 \), and in the student population, \( F(1, 54) = 35.58, p < .0001 \). In the majority condition, subjects reported that 63% of the state and 54% of the students supported the proposal, whereas in the minority condition, subjects believed that 32% of the state and 22% of the students supported the proposal. Thus, the source manipulation was successful.

**Attitudes**

A global attitude measure was constructed by averaging responses to the six evaluative items described previously. The scale formed by these items yielded a coefficient alpha of .92. Two effects emerged in the 2 \( \times \) 2 ANOVA: a marginal main effect for source, \( F(1, 54) = 3.53, p < .07 \), and a significant interaction between the source and argument quality factors, \( F(1, 54) = 4.67, p < .04 \). Overall, the majority source (\( M = 5.91 \)) tended to produce more agreement than the minority source (\( M = 4.93 \)). More important, however, an examination of the interaction revealed that subjects were more influenced by the quality of the arguments when they were endorsed by the majority than when they were endorsed by the minority. An analysis of the simple main effects shows that the difference between the strong (\( M = 6.61 \)) and weak (\( M = 5.2 \)) argument conditions is marginally significant, \( F(1, 26) = 3.9, p < .06 \), for the majority source, but not for the minority source (\( M = 5.35 \) for weak and \( M = 4.52 \) for strong arguments, \( F < 1 \)). This analysis indicates that message content is a more important determinant of persuasion when the message is supported by a majority rather than a minority and supports Mackie's (1987) conclusion that majority sources increase consideration of message arguments over minority sources.

**Message-Relevant Thoughts**

A message-relevant thought index was created for each subject by calculating the ratio of the number of positive thoughts to the total number of positive and negative thoughts generated. A 2 \( \times \) 2 ANOVA performed on this index revealed that there was a significantly greater proportion of positive thoughts produced toward the position when advocated by the majority (\( M = .54 \)) than the minority (\( M = .16 \)), \( F(1, 54) = 14.99, p < .001 \). Although not significant, the pattern of thoughts for the Source \( \times \) Argument quality interaction was in the direction consistent with the attitude data. That is, the difference in thoughts between strong and weak arguments is somewhat greater when the source is a majority (strong \( M = .60 \); weak \( M = .48 \)) than when the source is a minority (strong \( M = .17 \); weak \( M = .15 \)).

**Recall of Message Arguments**

The only effect on message recall was an unanticipated main effect for argument quality, \( F(1, 54) = 18.7, p < .001 \). This main effect occurred because weak arguments were remembered better (\( M = 4.79 \)) than strong arguments (\( M = 2.76 \)). Maass and Clark (1983) and Trost et al. (1992) hypothesized that minorities would produce greater message recall than majorities, but no significant effects were observed. Mackie (1987) found that subjects recalled more of the majority arguments than the minority arguments, but this was obtained in a within-subjects design where subjects were exposed to both majority and minority arguments. In the typical persuasion study where subjects are presented with one-sided messages, recall has often proven to be a poor indicator of either message reception or elaboration (see Eagly & Chaiken, 1993).

**Discussion**

Our first study demonstrated that the strength of the substantive message arguments had a greater impact on attitudes when they were presumed to reflect a majority rather than a minority viewpoint. That is, when the majority used strong arguments in its advocacy, attitudes were more favorable toward the proposal than when the majority used weak arguments. Yet, the quality of arguments used by the minority advocating the same proposal had absolutely no impact on attitudes.
Although the attitude data provided evidence for the conclusion that majority advocacy leads to greater scrutiny of the message content than minority advocacy, the thought data were weaker. In particular, although an interaction of source status and argument quality was observed on the attitude measure, only a main effect for source status was observed on the valence of thoughts, suggesting that majority advocacy simply produced more favorable thinking than minority advocacy. There are at least two possible explanations for the discrepancy in the attitude and thought data. First, as suggested by Mackie (1987), the enhanced processing of the message induced by the majority source could have been favorably biased. This positivity bias could have resulted because of the tendency for subjects' thoughts to converge on the solution advocated by the majority source (cf. Nemeth, 1986; see Footnote 1). A strong positivity bias in thinking could attenuate the impact of the argument quality manipulation on the thought measure. Second, however, the positive main effect of source on thoughts and attitudes could have reflected a postmessage bias to report thoughts and attitudes that were consistent with the majority point of view. In any case, because of the somewhat different experimental results for the attitude and thought data from this study, any strong conclusions about the mediation of attitude change are premature.

Despite these limitations, Experiment 1 provides support for the view that majority advocacy is having a greater impact on the extent to which people consider the specific information provided in the message in forming their attitudes. Thus, there is some converging evidence, both from earlier work using thought-listing procedures (e.g., Mackie, 1987) and the results from Experiment 1 using the argument quality paradigm, that majority advocacy of a counterattitudinal proposal leads to greater consideration of the arguments provided than the same proposal from a minority.

**Why Would People Scrutinize Majority Messages More?**

Is it the case that people invariably consider information from majorities more carefully than information from minorities? There are a number of reasons why this could be so. For example, people might think that a position advocated by a majority is more likely to become reality than the same position advocated by a minority. In a democratic society, especially with issues involving future policy, it is likely that a proposal supported by the majority is more likely to occur. Because of this, it would be more important to process and understand what a majority says than what a minority advocates. Another account centers on the phenomena of identification (Kelman, 1958). People might view members of majorities as more attractive, or they might want to be like the majority. Thus, people might process the majority message more in order to know what they should be thinking. Explanations of the majority processing effect such as these suggest that majorities would typically produce greater scrutiny of message content than minorities.²

An alternative explanation for the enhanced message scrutiny engendered by the majority endorsement contends that it is not majority advocacy per se that is critical to the enhanced message processing, but rather the combination of a majority endorsement and a strongly counterattitudinal position. Mackie (1987), for example, noted that disagreement with a majority is “likely to provoke considerable cognitive activity because it violates expectations severely” (p. 42). Phenomena such as the false consensus effect (Ross, Greene, & House, 1977) suggest that people expect that their attitudes are shared with the majority of people. Therefore, it would be surprising to discover that the majority supports a position that one finds intuitively aversive. Evidence from attribution and other studies suggests that information that is inconsistent with one's expectations can instigate greater information-processing activity (e.g., Hastie & Kumar, 1979; Pyszczynski & Greenberg, 1981). Thus, an individual confronted with a majority advocating a counterattitudinal position would likely be motivated to scrutinize the message to figure out why so many people were in favor of a disliked position.

Related to the violation of expectations explanation is the notion of threat. It may be that when a majority supports something inconsistent with one's own opinion, this indicates that one is deviant (i.e., the message recipient is in the minority). It is therefore important to process what the majority is saying to reduce the threat of being inconsistent with or deviant from the majority. This could happen by coming to understand (and possibly accept) why the majority supports the position, or by gathering information that bolsters one's satisfaction with being deviant from the majority. The “violation of expectations” and “ threat” explanations suggest that there is an underlying “imbalance” or “incongruity” in a setting in which the majority is advocating something counterattitudinal that would motivate greater scrutiny of the majority message. That is, if one has a positive unit or sentiment relationship with the majority, one would not expect a position with which one has a negative sentiment relationship to be advocated (Heider, 1946, 1958).

The explanations we have outlined suggest two broad families of theories concerning the information-processing consequences of endorsements by majorities and minorities. The first set of explanations suggests that majority endorsement should typically lead to greater message processing than minority endorsement because majority messages are seen as more worthy of scrutiny (e.g., because majority proposals are more likely to occur, or because people want to identify with the majority position). Thus, the majority-scrutiny effect should be relatively noncontingent on the particular position taken by the majority. The second set of explanations suggests that there are potential conditions under which mere minorities as well as majorities might enhance message processing, and thus that message scrutiny is contingent on a particular combination of source and message position. Experiment 2 was designed to provide a crit-

² Of course, by including specific information that leads people to believe that the minority is actually more attractive or informed than the majority, or that the minority position is more likely to occur, the effect of source on message scrutiny could be reversed according to these theories of majority processing effects. These inferences would not normally accompany mere majority or minority advocacy, however. Our interest here is on the impact of mere majorities or minorities in the absence of other information about the source.
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ical test contrasting the noncontingent and the contingent frameworks.

Experiment 2

To examine the potential utility of the contingent over the noncontingent approaches to majority versus minority message scrutiny, one must create conditions under which the contingent theories would expect minorities to lead to greater message scrutiny than majorities. In this regard, consider the impact of having a proattitudinal rather than a counterattitudinal advocacy endorsed by a majority or a minority. For the counterattitudinal position used in Experiment 1 and in much of the past research, the majority source is supporting an opinion position counter to the recipient’s own position, and thus the target of influence becomes a member of an implied minority. As noted previously, it could be surprising or threatening to have the majority of people advocating something one initially finds negative. Assuming that in general, people prefer to identify with the majority, the persuasion setting is one of “imbalance” when one disagrees with a majority. Therefore, people might be motivated to gain more information about the majority’s position. When a counterattitudinal position is supported by a minority, however, the target becomes a member of the implied majority. It is neither surprising nor threatening that a mere minority support something perceived to be undesirable. This is the typical expected or “balanced” state of affairs. It likely would be easy to reject the minority position without having to gain further information.

However, what happens if the issue being advocated is proattitudinal and initially sounds desirable? Now, when a majority is advocating an agreeable position, the recipient is a member of the implied majority. Here, the persuasion setting is expected and nonthreatening. Thus, one can agree without having to expend further effort. On the other hand, when only a minority is supporting a position that sounds initially favorable, this implies that the majority does not. This should cause surprise, threat, curiosity, or some other state of “imbalance” that could motivate the individual to seek further information by examining the persuasive message.3

Thus, in Experiment 2 we varied whether the persuasion context was “balanced” or “imbalanced” to examine the contingent versus the noncontingent explanations for the majority scrutiny effect observed in Experiment 1. To create balanced and imbalanced persuasion settings, we presented pro- or counterattitudinal messages from majority or minority sources. We also manipulated the quality of the arguments presented in the message. The noncontingent theories predict enhanced message processing when the position is advocated by a majority regardless of the balanced or imbalanced nature of the persuasion setting. That is, if the enhanced message scrutiny stems from a desire to identify with the majority or from a concern that the proposal is more likely to become reality when advocated by a majority, it should not matter whether the proposal is pro- or counterattitudinal. Regardless of whether the persuasion context is balanced or imbalanced, subjects should scrutinize the majority message more than the minority message, resulting in a Source X Argument Quality interaction that duplicates the attitude pattern found in Study 1.

In contrast, the contingent theories hold that in balanced (low surprise or low threat) situations, minimal message scrutiny should occur, but in imbalanced (high surprise or high threat) situations, careful message processing should be likely. In Experiment 2, balanced and imbalanced persuasion settings were defined by the combination of source status (majority vs. minority) and message position (pro- vs. counterattitudinal). That is, two “balanced” conditions were created, one in which the majority source takes a proattitudinal position and one in which the minority source takes a counterattitudinal position. These are the expected states in which the message recipients agree with the majority and disagree with the minority. Similarly, two “imbalanced” conditions were created, one in which the majority takes a counterattitudinal position and one in which the minority takes a proattitudinal position. These are the unexpected states in which the message recipients disagree with the majority and agree with the minority. The critical prediction for the contingent approach is an interaction between persuasion context and argument quality. That is, when confronted with an imbalanced (unexpected) persuasion context, regardless of whether it is induced through a majority or minority advocacy, there should be enhanced message scrutiny relative to conditions in which the persuasion context is balanced. This is because the contingent approach holds that it is not a majority or minority advocacy per se that induces greater scrutiny of the message, but rather the balanced or imbalanced state that occurs depending on the specific pairing of the majority and minority source with a pro- or counterattitudinal message. Thus, the contingent approach predicts that attitudes and thoughts should show greater differentiation as a function of argument quality under an imbalanced setting relative to a balanced one.

An ancillary, and less conceptually interesting result is also expected by the contingent approach given the nature of our design. That is, in the balanced persuasion conditions where little argument processing is taking place, either the majority versus minority source status or the valence of the advocated issue (pro- vs. counterattitudinal) alone may be sufficient to derive one’s attitude. Thus, an interaction between balanced versus imbalanced setting and source status would be expected. Here,

3 In Mackie’s (1987) research, which presented subjects with both majority and minority viewpoints, subjects were divided into groups of those who initially agreed with the majority and those who did not. Because of the within-subjects design, however, when subjects agreed with the majority, they simultaneously disagreed with the minority (balanced case), and when they disagreed with the majority, they simultaneously agreed with the minority (imbalanced case). Mackie (1987) concluded that subjects engaged in greater message scrutiny in the imbalanced than in the balanced case. However, because of the within-subjects design, it was not possible to determine whether the enhanced message processing in the imbalanced case was due to disagreement with the majority, agreement with the minority, or both. As Mackie (1987) noted, “manipulation of the presence and absence of majority and minority proattitudinal and counterattitudinal messages in the same design is necessary” to explore these issues further (p. 49). This is accomplished in our Experiment 2.
attitudes should show greater differentiation as a function of source status under a balanced setting relative to an imbalanced one. Specifically, in the balanced setting, the majority (proattitudinal) message should produce more agreement than the minority (counterattitudinal) message. In the imbalanced setting, where the source and position cues conflict, a smaller difference would be expected.

In sum, the contingent approach expects two two-way interactions to emerge on the attitude and thought data: a Setting × Argument Quality interaction and a Setting × Source Status interaction. In contrast to these interactions, the noncontingent theories predict a different two-way interaction. Specifically, as noted earlier, an interaction between majority versus minority source status and argument quality is expected that should hold regardless of the balanced versus imbalanced persuasion context. According to the noncontingent theories, argument quality should have a greater impact on attitudes for majority over minority sources in both balanced and imbalanced persuasion contexts.

Method

Subjects

The subjects were 184 volunteers from introductory psychology courses at Ohio State University who received course credit for their participation. As in Experiment 1, subjects came into the lab in groups of 6–8 ostensibly to evaluate the effectiveness of various media presentations (e.g., print, television, and radio) in communicating information. Subjects were randomly assigned to conditions representing a 2 (source: majority or minority) × 2 (argument quality: strong or weak) × 2 (setting: balanced [i.e., majority, proattitudinal issue and minority, counterattitudinal issue] or imbalanced [i.e., majority, counterattitudinal issue and minority, proattitudinal issue]) between-subjects design.

Independent Variables

Manipulation of majority versus minority source status. The majority and minority status of the source was manipulated in the same way as in Experiment 1. For the majority source condition, the newspaper article indicated that both 86% of the state residents and 78% of the students at Ohio universities supported the proposed issue. For the minority source condition, both 18% of the state residents and 12% of the students supported the proposal.

Manipulation of balanced versus imbalanced setting. The “community service” topic and messages used in Study 1 were modified in Experiment 2 to create a proposal that could be framed either positively (proattitudinal) or negatively (counterattitudinal). Rather than advocating mandatory community service as a solution to the state budget crisis, the issue advocated the student performance of “university services.” A pretest was conducted on an independent sample of 75 subjects from the same population. Subjects were presented only the positively or negatively framed topic (i.e., without either source manipulations or arguments) and were asked to circle the percentage of Ohio college students they thought would support the proposal. Responses were made by circling the percentage on a scale that was closest to their estimate of student support for the issue. The scale went from 0% to 100% in 5% increments. Subjects expected a majority of students to support the proattitudinal proposal (M = 54.72), but only a minority to support the counterattitudinal message (M = 36.87). F(1, 68) = 11.39, p < .001. In addition, pretest subjects were then asked to indicate how favorable they, themselves, were toward the proposal. On a scale where 1 indicated “strong opposition” and 9 indicated “strong support,” subjects reported that they were generally opposed to the counterattitudinal message, as were they, and they expected a majority of students to be in favor of the proattitudinal message, as were they. Manipulation of argument quality. The proposal was either supported with strong, cogent arguments or it was supported with weak, specious arguments. The arguments were adapted from those used in Experiment 1 to support the new issue, “student performance of university services.” A pretest was conducted on an independent sample of 20 subjects using the same procedure as in Study 1 to select arguments that were considered strong and weak. An example of the essence of one strong argument is, “The option for students to provide two years of university service will ensure that a college education will remain affordable for the vast majority of students desiring to earn a college degree.” Other strong arguments explained how the proposal would help retain and entice world-renowned scholars to the university, expand the number of courses offered, the library collection, and the computer labs. An example of the essence of a weak argument is, “Students will experience a substantial reduction in the amount of leisure time, thus helping them learn how to structure their remaining time to maximize the efficiency with which they study, work, and relax.” Other weak arguments also focused on presumed benefits of the proposal such as a reduction in the number of hours the staff would have to keep the libraries and computer labs open and a reduction in drunkenness and rowdiness that would occur because students would be busy working. The same strong and weak arguments were used to support both the pro- and the counterattitudinal messages (cf. Petty & Brock, 1976).
Procedure

The cover story was the same as in Study 1. Essentially, subjects were led to believe that their task was to evaluate the effectiveness of various types of media presentations. Subjects were told that they were "randomly assigned" to the newspaper condition and were presented with a packet of articles. The first two articles were selected from local city and campus newspapers and dealt with the state budget crisis and possible repercussions for the university. The third article was the persuasive proposal and the results of a statewide poll on the issue that found that a majority (or a minority) of citizens and students supported the proposal. After this, the article described arguments in favor of the proposal that had been put forth. Subjects were instructed to signal the experimenter when they had finished reading the articles. The experimenter collected the articles and passed out the questionnaire packet containing the dependent measures. Subjects were instructed to proceed through the packet in order. On finishing the questionnaire, subjects were debriefed and thanked for their participation.

Dependent Measures

The questionnaire packet included basically the same items as in Experiment 1. That is, subjects first responded to the six semantic differential attitude items (e.g., good–bad). Again, the instructions stated that one's opinions about an issue could influence the way one evaluates the effectiveness of the communication presentation, and, therefore, attitudes would be assessed. Following these were a variety of questions consistent with the cover story, manipulation check items, and other ancillary measures. All responses were made on 9-point rating scales with anchors of 1 and 9 (where 1 represented not at all ... and 9 represented extremely ...). These were followed by the thought-listing task in which subjects were instructed to write down all of the thoughts they generated while reading the message. Next, as in Experiment 1, subjects coded their thoughts for support or opposition to the message. If the thought was favorable toward the proposal, it was to be coded as a positive thought; if it was unfavorable, it was to be coded as a negative thought. Otherwise, the thought was coded as neutral. Finally, subjects were asked to recall all of the arguments they could remember that appeared in the message.

Results

Manipulation Check of Majority and Minority Advocacy

Responses to all questions were entered into 2 (setting: balanced or imbalanced) × 2 (source: majority or minority) × 2 (argument quality: strong or weak) ANOVAs. There were significant source main effects on the manipulation check items assessing the percentage of state residents supporting the issue, F(1, 174) = 53.81, p < .0001, and the percentage of students supporting the issue, F(1, 174) = 46.01, p < .0001. That is, subjects appropriately identified the message as being advocated by the majority of students and Ohio residents in the majority conditions (M = 54.56 and 62.08, respectively) and perceived the minority of students and Ohio residents to be supporting the issue in the minority conditions (M = 32.97 and 38.56, respectively). Note that this held regardless of the balanced or imbalanced setting.

Attitudes

As in Study 1, a global attitude measure was constructed by averaging the six individual attitude items (α = .92). Two main effects emerged (see Table 1 for the full set of means). A marginally significant source main effect, F(1, 174) = 3.8, p < .06, demonstrated that people were more favorable toward the issue when endorsed by a majority (M = 5.83) than a minority (M = 5.26). In addition, a significant argument quality main effect was observed, F(1, 174) = 7.29, p < .01. People were more favorable toward the proposal when it was supported by the strong (M = 5.93) than the weak (M = 5.16) arguments.

Of greatest conceptual interest, a Setting × Argument Quality interaction, F(1, 174) = 4.3, p < .04, emerged. This result, anticipated by the contingent framework, revealed that argument quality had a greater impact on attitudes when the persuasion setting was imbalanced than when it was balanced (see top panel of Figure 1). Attitudes following the message with strong arguments (M = 5.68) did not differ from attitudes following the message with weak arguments (M = 5.5, F < 1), in the balanced setting. When the setting was imbalanced, however, attitudes based on the message with strong arguments (M = 6.17) were more favorable than attitudes based on the message with weak arguments (M = 4.8), F(1, 88) = 13.73, p < .0004.

In addition, the ancillary Setting × Source Status interaction anticipated by the contingent framework because of the particular design used in this research was also obtained, F(1, 174) = 5.3, p < .03. As depicted in the bottom panel of Figure 1, an analysis of simple main effects revealed that under the balanced conditions, majority advocacy of the positively framed proposal produced more favorable attitudes (M = 6.22) than minority advocacy of the negatively framed proposal (M = 5.0), F(1, 85) = 7.63, p < .007. Under the imbalanced conditions where the source and position cues were opposite in valence, no differ-

<table>
<thead>
<tr>
<th>Argument Quality</th>
<th>Setting</th>
<th>Minority Source</th>
<th>Majority Source</th>
<th>Minority Source</th>
<th>Majority Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong</td>
<td>Balanced setting</td>
<td>4.97</td>
<td>6.44</td>
<td>6.36</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td>Imbalanced setting</td>
<td>5.04</td>
<td>6.01</td>
<td>4.74</td>
<td>4.89</td>
</tr>
<tr>
<td>Weak</td>
<td>Balanced setting</td>
<td>2.20</td>
<td>2.22</td>
<td>1.83</td>
<td>2.14</td>
</tr>
<tr>
<td></td>
<td>Imbalanced setting</td>
<td>2.20</td>
<td>2.22</td>
<td>1.83</td>
<td>2.14</td>
</tr>
</tbody>
</table>
Message-Relevant Thoughts

As in Experiment 1, a message thought index was created for each subject by calculating the ratio of positive message thoughts to the total number of positive and negative thoughts (see Table 2 for the full set of means). First, this analysis yielded a significant Setting × Argument Quality interaction, $F(1, 174) = 5.63, p < .02$, that was identical to the interaction obtained on the attitude data. That is, in the balanced setting, there were no differences in the ratio of positive thoughts generated in response to the message with strong arguments ($M = .28$) and the message with weak arguments ($M = .32, F < 1$). Yet in the imbalanced setting, the ratio of positive thoughts generated in response to the message with strong arguments ($M = .39$) was greater than the ratio of positive thoughts generated in response to the message with weak arguments ($M = .21$), $F(1, 89) = 7.95, p < .006$.

In addition, a significant Setting × Source interaction, $F(1, 174) = 5.44, p < .03$, was obtained. The pattern of the means showed that majority advocacy produced a greater proportion of positive thoughts in the balanced ($M = .32$) than the imbalanced ($M = .21$) situation. For the majority source, the balanced message was proattitudinal, whereas the imbalanced message was counterattitudinal. The reverse held for the minority source, where there was a higher ratio of positive thoughts under the imbalanced conditions ($M = .40$) relative to the balanced conditions ($M = .29$). For the minority source, the imbalanced

<table>
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<tr>
<th>Argument Quality</th>
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<th>Imbalanced Setting</th>
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<tbody>
<tr>
<td>Strong $M$</td>
<td>.25</td>
<td>.49</td>
</tr>
<tr>
<td>Weak $M$</td>
<td>.33</td>
<td>.31</td>
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<tr>
<td>Minority source</td>
<td>23</td>
<td>22</td>
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<tr>
<td>Majority source</td>
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<td>30</td>
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<tr>
<td>SD</td>
<td>.30</td>
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</table>

When the attitude data are analyzed according to a $2 \times 2$ (position: counterattitudinal or proattitudinal) × 2 (source: majority or minority) ANOVA, the following results are obtained. A position main effect, $F(1, 174) = 5.30, p < .03$, shows that people are more favorable toward the positively framed ($M = 5.86$) than the negatively framed position ($M = 5.24$). A marginal source main effect, $F(1, 174) = 3.8, p < .06$, shows that people are more favorable toward the majority ($M = 5.83$) than the minority message ($M = 5.26$). An argument quality main effect, $F(1, 174) = 7.29, p < .01$, indicates that people are more favorable toward the strong ($M = 5.93$) than the weak arguments ($M = 5.16$). These main effects are qualified by a three-way Source × Position × Argument Quality interaction, $F(1, 174) = 4.3, p < .04$. An exploration of the means shows that the pattern appears exactly as the contingent framework predicts. When the position is framed negatively and is advocated by the majority, attitudes differ depending on the quality of arguments (strong $M = 6.0$; weak $M = 4.89$), $F(1, 44) = 4.0, p < .05$. However, there is no differential impact of argument quality on attitudes when the minority advocates a counterattitudinal position (strong $M = 4.97$; weak $M = 5.05$), $F < 1$. This replicates Study 1, which used only a counterattitudinal message. When the position is proattitudinal, the pattern is reversed. With majority advocacy, attitudes are not responsive to argument quality (strong $M = 6.44$; weak $M = 6.0$), $F < 1$. However, when the minority is advocating a positively framed position, there is differentiation of attitudes based on the quality of arguments. When the minority advocates the position with strong arguments, the attitude is significantly more favorable ($M = 6.36$) than when the position is advocated with weak arguments ($M = 4.74$), $F(1, 43) = 11.25, p < .002$.  

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Table 2

**Effect of Setting, Source, and Argument Quality on Ratio of Positive Thoughts Generated: Study 2**

<table>
<thead>
<tr>
<th>Argument Quality</th>
<th>Balanced Setting</th>
<th>Imbalanced Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strong $M$</td>
<td>.25</td>
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<td>23</td>
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</tr>
<tr>
<td>Majority source</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>SD</td>
<td>.30</td>
<td>.35</td>
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<tr>
<td>$n$</td>
<td></td>
<td></td>
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</tbody>
</table>

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$^6$ When the attitude data are analyzed according to a $2 \times 2$ (position: counterattitudinal or proattitudinal) × 2 (source: majority or minority) ANOVA, the following results are obtained. A position main effect, $F(1, 174) = 5.30, p < .03$, shows that people are more favorable toward the positively framed ($M = 5.86$) than the negatively framed position ($M = 5.24$). A marginal source main effect, $F(1, 174) = 3.8, p < .06$, shows that people are more favorable toward the majority ($M = 5.83$) than the minority message ($M = 5.26$). An argument quality main effect, $F(1, 174) = 7.29, p < .01$, indicates that people are more favorable toward the strong ($M = 5.93$) than the weak arguments ($M = 5.16$). These main effects are qualified by a three-way Source × Position × Argument Quality interaction, $F(1, 174) = 4.3, p < .04$. An exploration of the means shows that the pattern appears exactly as the contingent framework predicts. When the position is framed negatively and is advocated by the majority, attitudes differ depending on the quality of arguments (strong $M = 6.0$; weak $M = 4.89$), $F(1, 44) = 4.0, p < .05$. However, there is no differential impact of argument quality on attitudes when the minority advocates a counterattitudinal position (strong $M = 4.97$; weak $M = 5.05$), $F < 1$. This replicates Study 1, which used only a counterattitudinal message. When the position is proattitudinal, the pattern is reversed. With majority advocacy, attitudes are not responsive to argument quality (strong $M = 6.44$; weak $M = 6.0$), $F < 1$. However, when the minority is advocating a positively framed position, there is differentiation of attitudes based on the quality of arguments. When the minority advocates the position with strong arguments, the attitude is significantly more favorable ($M = 6.36$) than when the position is advocated with weak arguments ($M = 4.74$), $F(1, 43) = 11.25, p < .002$.  

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Figure 1. **Top panel:** Interaction of setting (balanced or imbalanced) and argument quality (strong or weak) on attitudes. **Bottom panel:** Interaction of setting (balanced or imbalanced) and source status (majority or minority) on attitudes.
message was proattitudinal, whereas under balanced conditions the message was counterattitudinal. Thus, this interaction simply represents the fact that subjects generated a greater proportion of positive thoughts to the pro- than to the counterattitudinal message.⁷

Recall of Message Arguments

Unlike Experiment 1, there were no main effects or interactions on the number of recalled arguments in the persuasive messages.

Mediation Analyses

The experimental analyses of the attitude and thought data provided support for the contingent framework in that argument quality had a larger impact on attitudes and thoughts when the situation was imbalanced than when it was balanced. However, to explore whether the argument quality effect under the imbalanced conditions was mediated by subjects’ thoughts, path analyses were conducted. According to the contingency theory predictions, under conditions of imbalance (i.e., majority advocacy of a proattitudinal issue or minority advocacy of a counterattitudinal topic), attitudes should be influenced by the quality of the arguments in the message. To the extent that the argument quality effect on attitudes in the imbalanced conditions is a result of active thinking about and elaboration of the arguments, the effect should be mediated by the ratio of positive thoughts generated in response to the message. In contrast, under conditions of balance (i.e., majority advocacy of a proattitudinal topic or minority advocacy of a counterattitudinal topic), there should not be thoughtful mediation of attitude change. Rather, attitudes could be based on some type of persuasive cue in the environment. For example, recipients could base their attitudes on immediate information in the setting such as the fact that a majority is advocating an issue or the issue appears negative, or a minority is advocating an issue or the issue appears positive.

Two path analyses were conducted looking at the effect of source status and argument quality on the ratio of positive thoughts generated and subsequent attitudes under balanced and imbalanced settings, separately. For both models, the source variable was constructed by coding the majority source as 1 and the minority source as 0. Recall that for the balanced conditions, the source status and the valence of the position are deliberately combined such that the majority is advocating a counterattitudinal topic and the minority is advocating a proattitudinal topic. For the balanced conditions, the source status and the valence of the position advocated are deliberately combined such that the majority is advocating a proattitudinal position or the minority is advocating a counterattitudinal topic. The argument quality variable was constructed by coding strong arguments as 1 and weak arguments as 0, and was, of course, identical in the balanced and imbalanced conditions. The message thought index, representing the ratio of positive message thoughts to the total number of valenced message thoughts generated, served as the thought variable. Finally, subjects’ global attitude score served as the attitude variable.

The results of the path analyses provide further support for the contingent model. In the top panel of Figure 2, the results for the imbalanced conditions are presented. In these conditions, where thoughtful attitude change was postulated to occur, both argument quality and the source/position variable influence attitudes through their impact on the positivity of the issue-relevant thoughts generated. In particular, under the imbalanced conditions, strong arguments are associated with more favorable issue-relevant thoughts than weak arguments, and these thoughts in turn predict attitudes. In addition, when the major-

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Figures 2. Top panel: Direct and mediated effects of argument quality and source status on attitudes under imbalanced conditions. Bottom panel: Direct and mediated effects of argument quality and source status on attitudes under balanced conditions. *p < .05.
ity source presented a counterattitudinal position, fewer favorable thoughts were generated than when a minority source presented a proattitudinal position. Thus, when the message position and the source were incongruent and message processing was presumably high, the position (pro or counter) taken appears to be more important in guiding thinking than was the mere number of people who supported the issue. Interestingly, argument quality also had a direct effect on attitudes in the imbalanced conditions, suggesting that the effect of argument quality was only partially mediated by the issue-relevant thoughts generated. That is, mere attention to and reception of the arguments in addition to elaboration of them may have contributed to the impact of argument quality on attitudes (see Eagly & Chaiken, 1993; Rhores & Wood, 1992). Alternatively, the thought-listing measure may not be capturing all of the variance in message processing.

In stark contrast to the pattern observed in the imbalanced conditions, no thoughtful mediation of either independent variable is evident in the balanced conditions (see bottom panel of Figure 2). In the balanced conditions, there is no direct effect on positive thoughts of either the source or argument quality variables. Rather, the source/position variable is directly affecting attitudes, and argument quality has neither a direct nor an indirect effect.8

**Discussion**

Experiment 2 made two contributions. First, it provided a replication of the Experiment 1 finding that when the message was counterattitudinal, the quality of the arguments endorsed by a majority (imbalanced condition) was a more important determinant of attitudes than the quality of the arguments presented by a minority (balanced condition). In prior research, the argument quality paradigm has been used successfully to examine the extent to which various situational (e.g., distraction; Petty et al., 1976) and individual (e.g., prior knowledge; Wood, Kaligren, & Priesler, 1985) variables have an impact on message scrutiny. The current research suggests that this procedure is useful for studying the persuasive impact of majority and minority sources as well.

Of considerably greater importance, Experiment 2 distinguished between the contingent and noncontingent explanations for the majority scrutiny effect by demonstrating that mere majority advocacy is not sufficient to induce greater message processing. Rather, it is the relationship between the source and the position taken that creates a setting in which the recipient decides whether to expend the necessary effort to attend to and scrutinize the issue-relevant information presented. In Experiment 2, when the source and message position were imbalanced (i.e., a majority endorsing a disagreeable position or a minority endorsing an agreeable position), the quality of the issue-relevant arguments presented was an important determinant of the thoughts and attitudes of the message recipients. On the other hand, when the source and message position were balanced (i.e., a majority endorsing an agreeable position or a minority endorsing a disagreeable position), the quality of the arguments in the message had no impact on either thoughts or attitudes. Instead, people simply accepted or rejected the message on the basis of the source or the position espoused. In addition, our path analyses showed that recipients' attitudes toward the issue were mediated by the ratio of positive thoughts generated in response to both the source/position and the argument quality manipulations only in the imbalanced conditions. In the balanced conditions, attitudes were not mediated by issue-relevant thoughts, but were influenced directly by the source or the valence of the position taken.

Thus, Experiment 2 has shown that an incongruency between the source (majority or minority) and the position taken (pro or counterattitudinal) can lead to enhanced message scrutiny. In this regard, it is interesting to note that Maheswaran and Chaiken (1991) have recently investigated another kind of source-message incongruency that appears to instigate careful message processing. In their study, subjects were presented with an advertisement for a new consumer product. The advertisement conveyed information concerning the degree of consensus in a test market group's evaluation of the machine. That is, either a majority or a minority of consumers were said to like the new product better than competing brands. However, the information presented about the product either made it appear superior to or inferior to competing brands. When a majority of consumers were said to favor the new product, people would presumably expect its attributes to be superior to competing brands, and when only a minority of consumers were said to favor the new product, people would presumably expect its attributes to be inferior to competing brands. Maheswaran and Chaiken (1991) hypothesized that when the source and message arguments were incongruent (e.g., a majority favoring the product with inferior attributes), scrutiny of the message attributes would be greater than when the source and message information were congruent with expectations. This source-content incongruency was also possible in the current research. That is, people might expect the majority to have strong rather than weak arguments in favor of its position. On the other hand, if only a minority favor something, it is more likely that the arguments are weak rather than strong.

We have already demonstrated that the source-position incongruency enhanced attention to the quality of the issue-relevant arguments presented in the message, but it is also possible to examine the hypothesis that source-content incongruency would also increase argument scrutiny. In fact, a two-stage model might be appropriate. In Experiment 2, subjects were
first confronted with a source–position congruency or incongruency. When there was incongruency, subjects engaged in message processing, but when there was congruency, there was little message-based evaluation. However, it is possible that subjects who experienced no incongruency due to source and message position experienced incongruency once the arguments were encountered. For example, consider a recipient who received the majority source presenting a proattitudinal message. There is no enhanced motivation to process the message because there is no expectancy violation at this point (because an agreeable position would be expected to be supported by a majority). Once the arguments are encountered, however, it is possible that a source–content incongruency would emerge. Specifically, subjects receiving the majority-proattitudinal-weak arguments message might engage in greater processing than subjects receiving the majority-proattitudinal-strong arguments message because although the conditions are equal in source–position congruency, they differ in source–content congruency.

To examine the operation of this second type of incongruency, we conducted the same regression analyses outlined by Maheswaran and Chaiken (1991). These analyses yielded no support for the two-stage model of imbalance, but rather suggested that in the present research, the first stage of imbalance (source–position incongruency) was sufficient to produce the decision to process the message or not (see Baker, 1992, for a complete description of these analyses). Although there was no support for a second stage of imbalance (source–content incongruency) as a determinant of message processing in the current research (see also Maheswaran, Mackie, & Chaiken, 1992, for a failure to obtain a source-content incongruency effect), it is possible that something of this nature occurs in other contexts. Perhaps, the second stage of imbalance was not appropriately captured in our studies. Maheswaran and Chaiken (1991) noted that special care was taken in their research to construct messages that subjects could recognize as strong or weak with a minimal amount of processing. In the present study, subjects might not have been able to detect the strength or weakness of the message as easily. Alternatively, subjects may have already committed to processing or not processing the message on the basis of the first stage of imbalance (source–position incongruency) that was not manipulated in the Maheswaran and Chaiken research. Nevertheless, the different types of incongruency that characterize persuasion settings and the order in which they operate is a fertile area for future research.

General Discussion

Surprise Versus Threat

Our experiments have shown that an incongruency between a source (majority vs. minority) and the position taken (pro- or counterattitudinal) can enhance scrutiny of the issue-relevant information contained in a persuasive communication. We further noted that there are at least two distinct psychological processes that could have produced the requisite motivation to process the message in the “imbalanced” conditions of Experiment 2. First, the relationship between the source (as majority or minority) and message position can lead to violations of expectations that cause people to be surprised. This surprise could instigate information-processing activity aimed at understanding the cause of the incongruency (e.g., see Pyszczynski & Greenberg, 1981). Second, the unexpected pairing of source and position could be threatening to the recipient of the persuasive message. For example, discovering that a majority favors a disliked position implies that the target is in the minority and deviates from the norm. This threat would likewise trigger information-processing activity (e.g., see Levine, 1991).

To ascertain whether the manipulations used in the current research induced either surprise or threat in the message recipients, we gathered data from an independent group of 80 subjects from the same population as used in Experiments 1 and 2. Specifically, subjects were recruited to participate in a study entitled, “newspaper survey.” Participants were told that the purpose of the study was to learn about how people reacted to newspaper articles. They were told that they would be provided with several newspaper headlines along with a brief synopsis of the article that followed. Their task would be to rate how surprising they found the headline and article to be, how threatening it was, and how curious they were about the story.

The newspaper survey contained three irrelevant headlines (e.g. “New TV Season to Debut in the Fall”) along with an article synopsis (e.g., “describes the new programs that will appear on ABC, CBS, NBC, and FOX…”). These irrelevant headlines and synopses were followed by one of the headlines used in Experiment 2, such as “Majority Favors Tuition Increase,” along with a sentence providing the critical information that a new plan that would increase tuition if students did not participate in university service was supported by 78% of Ohio college students and 86% of residents of Ohio. After each headline and synopsis, subjects’ rated on 9-point scales the extent to which they found the information to be not at all surprising versus very surprising, and not at all threatening versus very threatening. They also rated whether they were not at all curious about the story or very curious.

A 2 (minority or majority) X 2 (balanced or imbalanced) ANOVA revealed only main effects for the balance manipulation on the surprise and curiosity measures. That is, subjects who received the imbalanced headlines and summaries responded that they were more surprised (M = 6.68) than subjects receiving the balanced headlines and summaries (M = 5.25), F(1, 76) = 6.61, p < .01. Subjects in the imbalanced conditions were also more curious (M = 7.14) about the stories than subjects in the balanced conditions (M = 5.55), F(1, 76) = 7.10, p < .01, but there were no differences in perceptions of how threatening the stories were (F < 1).9 Although future research

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9 A main effect for “balance” in the reported analysis is equivalent to an interaction between source status (minority or majority) and message position (proattitudinal or counterattitudinal). That is, when analyzed as such, significant two-way interactions on the measures of surprise and curious showed that for the counterattitudinal topic, subjects were more surprised and curious when the issue was supported by a majority than a minority, but when the issue was proattitudinal, subjects were more surprised and curious when the issue was supported by a minority than a majority.
should more specifically examine the precise motivation that underlies the incongruency effects that we have observed, it appears more likely that the greater processing in the imbalanced settings is a result of surprise and curiosity rather than the experience of threat.

**Limitations and Conclusions**

The current research strongly indicates that models of majority versus minority influence that suggest that majority and minority processing effects are contingent on other factors in the persuasion setting are preferable to models that predict that mere majorities or minorities will always lead to greater message scrutiny. Although Moscovici’s (1980) premise that the type of influence is important to consider is compelling, his conclusion that minorities necessarily induce more message processing than majorities is challenged by the current data. That is, a primary contribution of the current research is to provide a moderator of when majorities and when minorities will produce greater message scrutiny. Our research suggests that it is not the case that only majorities (or majorities) produce the type of message processing associated with conversion or internalization. Rather, both majorities and minorities can presumably produce the private attitude change that stems from effortless message scrutiny.

This conclusion, of course, is tempered by the specific methodological choices we made in conducting this research. For example, one limitation of the current research is that we selected one particular way of manipulating minority and majority support, that is, the mere number of people in a population favoring an issue. Although this is a common manipulation and one that is represented in everyday life (e.g., when people hear the results of an opinion survey before message exposure), manipulations that use a more locally defined minority and majority might produce a persuasion context in which different expectations are present. For example, without knowing the extent of support in a population, it is possible to believe that a deviant minority in a subgroup could represent a global majority. Also, subjects in our research were not confronted by both majority and minority sources, but only heard one side. When people hear both sides in a discussion group, different expectations might emerge about why the minority has assumed the position it has taken (e.g., it takes a “brave” or “informed” minority to go against a majority in public), and these inferences might influence information-processing activity.

Previous research had suggested that either minority advocacy or majority advocacy enhances message scrutiny. Our research has suggested that source-position incongruency is a moderator of whether majorities or minorities enhance scrutiny of the substantive information presented in a persuasive message. The argument quality methodology we used produced a clear pattern of results. Majority endorsement invoked greater message processing than minority endorsement when the message position was unexpected and surprising (i.e., a counterattitudinal message), and minority endorsement produced greater message processing than majority advocacy when the minority position was unexpected and surprising (i.e., a proattitudinal message). Although a number of questions remain to be addressed, the current research strongly argues that the field should move away from the question of whether majorities or minorities induce greater message scrutiny. Instead, the focus of the next wave of research should be on the search for additional moderators of when minorities and when majorities induce greater message scrutiny and further specification of the underlying psychological processes that are responsible for these effects.

**References**


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