CHAPTER FIVE

MAJORITY VERSUS MINORITY INFLUENCE, MESSAGE PROCESSING AND ATTITUDE CHANGE: THE SOURCE-CONTEXT-ELABORATION MODEL

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Advances in Experimental Social Psychology, Volume 40 © 2008 Elsevier Inc.
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Abstract

This chapter examines the contexts in which people will process more deeply, and therefore be more influenced by, a position that is supported by either a numerical majority or minority. The chapter reviews the major theories of majority and minority influence with reference to which source condition is associated with most message processing (and where relevant, the contexts under which this occurs) and experimental research examining these predictions. The chapter then presents a new theoretical model (the source-context-elaboration model, SCEM) that aims to integrate the disparate research findings. The model specifies the processes underlying majority and minority influence, the contexts under which these processes occur and the consequences for attitudes changed by majority and minority influence. The chapter then describes a series of experiments that address each of the aspects of the theoretical model. Finally, a range of research-related issues are discussed and future issues for the research area as a whole are considered.

Never doubt that a small group of thoughtful, committed citizens can change the world. Indeed, it is the only thing that ever has.

(Margaret Mead)

... if either of the two opinions has a better claim than the other, not merely to be tolerated, but to be encouraged and countenanced, it is the one which happens at the particular time and place to be in a minority.


1. Introduction

We sat down to write this chapter in a year that saw the two hundredth anniversary of the abolition of the slave trade in the British Empire. Like many other instances in which prevailing attitudes were overturned and social movements galvanized, the seeds of the abolition protest were sown by a minority. Every social psychologist knows Sidney Lumet’s film Twelve Angry Men as an example of minority, and majority, influence. Twelve men meeting in a printing shop above a London pub are also credited with beginning the process whose bicentenary is celebrated this year, “what these citizens began rippled across the world and we feel its aftereffects still” (Hochschild, 2005, p. 1).
There are, of course, many attempts to influence our opinions every day that might not be as dramatic as the ones noted above. These attempts can come from a variety of directions—reading a newspaper, listening to the television/radio, hearing a debate, and face-to-face interactions are all situations where one person or group is trying to change the attitudes and opinions of another person or group. On occasions, the numerical support of the position advanced by the source of influence is salient by referring to the position as being supported by the “majority” or “minority” of the population or by revealing the percentage of people supporting the position. It is this aspect of attitude change that is the subject matter of this chapter and it addresses the basic research question—what are the contexts in which people will process more deeply, and therefore be more influenced by, a position that is supported by either a numerical majority or minority.

The potential influence of minorities was only belatedly introduced into social psychology by the pioneering theorizing and research of Serge Moscovici (1976, 1980; Moscovici and Faucheux, 1972), following our discipline’s initial focus exclusively on majorities. Yet the history of ideas, not to mention the rise and fall of fashions, musical styles, and so on, is replete with examples of minority influence. Galileo was humiliated by the Roman Catholic Church (for promulgating the view that the earth revolved around the sun; see White, 2007). In nineteenth century London, English physician Dr. John Snow attempted to persuade majority opinion that the epidemic disease it faced was carried in the capital’s water supply, and not due to atmospheric “miasmas” (see Johnson, 2006); but he was only vindicated after his death. Contemporary examples abound too, such as Peter Roberts, who founded Compassion in World Farming in 1967, and effected a transformation in more humane practices of animal welfare, which was “achieved by force of argument, not by violence or threats” (The Economist, December 2, 2006).

The remainder of the chapter is organized into six sections where we (1) briefly review the major theories of majority and minority influence with specific reference to which source condition is associated with most message processing; (2) review and evaluate research examining which source leads to most message processing; (3) outline a new theoretical model that specifies the processes underlying majority and minority influence, the contexts under which they occur and the consequences for attitudes changed by majority and minority influence; (4) describe a series of experiments that address each of the aspects of our theoretical model; (5) critically consider methodological and theoretical issues in current and future research; and (6) draw some conclusions for the research area as a whole.

1 In 1633, Galileo was forced by the Italian Inquisition to retract his heretical teaching. In 1980, the Pontifical Academy of Science reviewed his case, taking 12 years to concede that he was right.
2. Theoretical Models

You can’t turn a thing upside down if there’s no theory about it being the right way up.
—G. K. Chesterton (attributed)

We begin, as a necessary prologue to our review of the literature and then introduction to our own model, by reviewing some of the main models of majority and minority influence. We focus on the predictions each model makes concerning the processes associated with each source and the consequences of these processes for attitude change (for reviews of the area see De Dreu, 2007; De Dreu and De Vries, 2001; Martin and Hewstone, 2003a; Martin et al., 2008b). Of course, it would be ideal if one theory could account for all the data; but as Quiamzade et al. (in press) have written of this area, “straightforward theories are elegant and stimulating, but they do not account for the complexity of social influence dynamics” (p. 260).

For clarity of exposition, we have organized the theoretical models into those that specify main effects (i.e., predict specific, and different, processes and outcomes for each source) versus contingency models (i.e., predict processes and outcomes for each source dependent upon one or more contingency factor). This classification also reflects a chronological order in theory development with the main effects models being developed before the contingency models (Martin and Hewstone, 2003a). It should be noted that we only focus on theories that explicitly consider the issue of message processing and do not consider those that do not address this issue, such as mathematical models (Latané and Wolf, 1981; Tanford and Penrod, 1984) and self-categorization theory (David and Turner, 1996, 1999, 2001). Also, we only focus on those aspects of the models that specify which source is associated with most message processing and, in doing this, we do not provide exhaustive research evidence for each model (for relevant research on each model see De Dreu, 2007; Levine and Russo, 1987; Martin and Hewstone, 2003a, in press, Martin et al., 2008b).

2.1. Main effects models

In this section, we describe three models that propose specific, and different, processes for each source condition: conversion theory, convergent-divergent theory, and the objective consensus approach. The main predictions of these models are shown in Table 5.1.

2.1.1. Conversion theory

The dominant perspective in this area has been Moscovici’s (1980, 1985) (see also Moscovici, 1976 and Moscovici and Faucheux, 1972 for developments of the model) conversion theory which argues that all forms of
### Table 5.1  Key comparisons concerning main effects models

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<th>Conversion theory</th>
<th>Convergent-divergent theory</th>
<th>Objective consensus approach</th>
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<td><strong>Process</strong></td>
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<tr>
<td>Cognitive activity</td>
<td>Comparison</td>
<td>Validation</td>
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<td>Focus of attention</td>
<td>Characteristics</td>
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<td><strong>Indirect/private</strong></td>
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influence, whether from a majority or minority, result in conflict and that individuals are motivated to reduce that conflict. The resolution of conflict, however, varies depending on the nature of the source. In the case of majority influence, Moscovici proposes that individuals engage in a comparison process where they concentrate attention on “... what others say, so as to fit in with their opinions or judgments” (Moscovici, 1980, p. 214). In this situation, people wish to belong to the majority group, as identification with a majority is desirable and, through the social comparison processes, conform to the majority position. Because the goal is to attain majority group membership, and to avoid being categorized as a minority, people accept the majority position without the need for a detailed appraisal of the majority’s arguments. Because acceptance of the majority position has resulted from public compliance to this position without considering in details its arguments, the attitude change tends to be located only on a public/direct level and underlying attitudes are not affected.

In the case of minority influence, favorable social comparison is unlikely as minority membership is typically associated with undesirable characteristics. They are seen as deviant, rebarbative, and even sinister. This is why minority influence tends to occur later; as Gandhi wrote “First they ignore you, then they laugh at you, then they fight you, then you win.” In order to influence despite these difficulties, Moscovici (1976) argued that a persuasive minority would have to adopt a behavioral style of “consistency”; by “standing-up” to the majority, the minority shows that it is certain, confident, and committed to its position, and will not be easily swayed. William Wilberforce’s 20-year effort to introduce a Bill into parliament to abolish the slave trade is an example of such consistency and commitment. But consistency can also be thought of, and operationalized as, a more short-term variable, holding to a line in an argument, making the same point in several ways in a pamphlet, and so on. Through this behavioral style, majority members begin to see that the minority has a valid alternative that deserves, perhaps demands, to be considered. Moscovici proposes that the minority can encourage a validation process, leading the recipient of minority influence to “... examine one’s own responses, one’s own judgments, in order to confirm and validate them ... one’s main preoccupation [is] to see what the minority saw, to understand what it understood” (Moscovici, 1980, p. 215). By being consistent, the minority is “visible” within the group and attracts, or even demands, attention (Schachter, 1951). Whereas minority influence may not lead to public agreement, due to fear of being categorized as a minority member (Mugny, 1982), the close examination of the minority’s position may bring about attitude conversion on an indirect, latent, or private level (i.e., a more unconscious level).

According to Moscovici, majorities and minorities cause people to focus their attention on different aspects of the situation, “It would be an overstatement but not a mistake to say that in the face of a discrepant majority all
attention is focused on others, whereas in the face of a discrepant minority, all attention is focused on reality; that, in the first case, the conflict is primarily a conflict of responses, and in the second case, it is a conflict of perceptions (Moscovici, 1980, p. 215). In his conversion theory, Moscovici explicitly states that exposure to a counter-attitudinal minority will result in greater cognitive activity (in terms of analyzing the message) than exposure to a counter-attitudinal majority (where there may be only a superficial analysis of the message content).

2.1.2. Convergent-divergent theory

Nemeth’s (1986, 1995) convergent-divergent theory focuses on the different types of thinking styles that can be instigated by majority and minority sources. Nemeth argues that people are motivated to assume that the majority is correct, and therefore when they are exposed to a counter-attitudinal majority this is stressful because it suggests that their position is wrong and also they fear disapproval from the majority group. In general, stress is thought to reduce a person’s focus of attention (Easterbrook, 1959) and lead to what is termed convergent thinking which is characterized by a “... convergence of attention, thought, and the number of alternatives considered” (Nemeth, 1986, p. 25). In the case of minority influence, the experience of stress is less than is the case with a majority as people believe that the minority is incorrect. As a result of the lower stress, and the minority being consistent and confident in their position, people are stimulated to understand a range of alternative views leading to divergent thinking which involves “… a greater consideration of other alternatives, ones that were not proposed but would not have been considered without the influence of the minority” (Nemeth, 1986, p. 25). What is radical about Nemeth’s perspective is that she suggests that the cognitive activity associated with minority influence results in a wider consideration of alternatives than would have been otherwise considered. This is why dissenting voices are so important for our democracies, whether in the legislature or the judiciary; Supreme Court justice Antonin Scalia is so well known for his dissenting opinions that he has earned the nickname the “Lone Ranger” (Talbot, 2005). Research has shown that this wider consideration of alternatives can, in some, but not all, settings result in improved judgments and performance. Indeed, in tasks that benefit from divergent thinking, minority influence has been shown to lead to better performance (e.g., Nemeth and Kwan, 1987; Nemeth and Wachtler, 1983), whereas on tasks that benefit from convergent thinking, a majority source was found to lead to better performance (e.g., Nemeth et al., 1992; Peterson and Nemeth, 1996).

In developing her theory, Nemeth has avoided the question of which source condition is associated with more message processing (Nemeth, 2003). The theory is widely interpreted as either showing no difference in the level of cognitive activity between majority and minority influence or as not
specifying the relationship (see De Dreu and De Vries, 1996). However, Nemeth does give a clear indication of the direction of thinking by predicting “... message-specific cognitive activity in response to a majority and issue-specific activity in response to a minority” (Nemeth, 1995, p. 284) and stating furthermore that “... cognitive activity induced by the minority is not about the message but, rather, about the issue” (Nemeth, 1995, p. 284). The theory argues that both majority and minority influence can lead to cognitive activity but that the direction, or focus, varies; majority influence leads to message processing whereas minority influence leads to issue processing. However, a potential concern here is the distinction between message- and issue-processing and how one can think of issues related to the message without first processing the content of that message. It seems more likely that message-relevant processing is a necessary precursor for issue-relevant thinking.

2.1.3. Objective consensus approach

The third main effects model is based on the objective consensus approach (Mackie, 1987) which draws upon concepts developed in the persuasion literature. In direct contradiction to conversion theory, this approach argues that it is a majority source that leads to message elaboration rather than a minority one. There are two reasons for this. First, people assume that the majority view reflects reality in the sense that “several pairs of eyes are better than one” and the majority position “… informs recipients about the probable validity of the arguments presented, directs attention to them, and results in the majority messages receiving considerable processing” (Mackie, 1987, p. 50). Second, based on the “false consensus effect” (Ross et al., 1977), people believe that they share similar attitudes to members of the majority group and hold different attitudes from those in the minority group (similar to convergent–divergent theory). As a consequence of these expectations, individuals expect to agree with a majority and disagree with a minority. When faced with a counter-attitudinal majority, the consensus expectation is broken, which is surprising, and this motivates people to analyze the majority arguments in an attempt to understand the difference in opinion. As Mackie proposes, “… disagreement with the majority is likely to induce considerable issue-relevant cognitive activity, thus producing internalization” (1987, p. 42). By contrast, exposure to a counter-attitudinal minority is consistent with the consensus heuristic, is therefore not surprising, and consequently one is less likely to process the minority’s message.

2.2. Contingency models

Next, we describe four models that propose that majority and minority influence can lead to different processes depending on the presence of one of more contingency variables. These models predict that both majority and minority can lead to message processing, but under different circumstances.
2.2.1. Source-position congruity
Based upon the objective consensus approach, Baker and Petty (1994) have proposed that the degree of message processing is determined by the relationship between the source and whether it breaks one’s expectation concerning consensus (i.e., the assumption that our attitudes and opinions are similar to the majority of people and different from the minority of people). When the source/position is expected or “balanced” (pro-attitudinal majority or counter-attitudinal minority), this situation is unsurprising and therefore it is unlikely to lead to deeper message processing. However, when the source/position is unexpected or “imbalanced” (counter-attitudinal majority or pro-attitudinal minority), this is surprising and it motivates individuals to process the message in order to understand the incongruity.

Other reasons why a majority might lead to greater message processing have been outlined by Baker and Petty (1994). People may assume that a majority-endorsed position is more likely to become adopted (or accepted by the population) than a minority-endorsed position, and therefore people believe it would be more important to process the majority’s arguments. Another reason might be that individuals prefer to identify with a majority group rather than a minority group and therefore process the majority message as a guide to what their own attitudes should be. Whereas these factors might lead to elaboration of the majority’s message, Baker and Petty recognize the multiple roles that source status can play and that in some situations (e.g., when elaboration was constrained to be low), majority status might act as peripheral cue leading to agreement without elaboration.

Whereas Baker and Petty (1994) propose that the source-position incongruence leads to message processing, Maheswaran and Chaiken (1991) argue that it is source-content incongruence that is most important. They propose that individuals expect the majority to have strong arguments and the minority to have weak arguments (though one could equally argue that people would expect a minority to have strong arguments as it has to be sure of its position in the face of the majority, whereas the power associated with a majority position is such that it need not have convincing arguments). Thus, message processing may occur when the source-content relationship is unexpected (i.e., majority/weak message or minority/strong message) and not when the relationship is expected (i.e., majority/strong message or minority/weak message).

Baker and Petty (1994) (see also Baker, 1992) suggest a third approach involving a two-stage process. The first stage concerns the source-position relationship discussed above. If participants are motivated to process the message (in the imbalanced situation), then the second stage of source-content occurs. Thus, individuals will be more likely to process a pro-attitudinal message from a majority with weak arguments than one from the same source with strong arguments. In balanced situations, the motivation is low but may be sufficient for individuals to examine the nature of the message. If this occurs, then the second stage is reached. The two-stage process predicts
message processing in all conditions except those where the source/position and source/content pairings are expected (i.e., counter-attitudinal minority with weak arguments, and pro-attitudinal majority with strong arguments).

2.2.2. Conflict elaboration theory

The second contingency model for analyzing majority and minority influence is conflict elaboration theory proposed by Mugny, Pérez, and their colleagues (Mugny et al., 1995; Mugny and Butera, 1995; Pérez and Mugny, 1996; see also Quiamzade et al., in press). The model is similar to conversion theory, in proposing that divergence from a source of influence causes conflict. The resulting psychological processes arising from that conflict depend on whether it originates from a majority or minority source. However, unlike conversion theory, which focuses on conflict resolution, this approach considers conflict elaboration, a process that “... refers to the way people give meaning to this divergence” (Mugny et al., 1995; p. 161).

Unlike conversion theory, conflict elaboration theory specifies a contingency approach specifying that different source characteristics are relevant in different tasks. The nature of the conflict elaboration, and the type of influence, depends on (a) the nature of the task and (b) the nature of the source introducing the divergence. Two contingency variables are associated with the nature of the task. The first concerns the relevance of making an error. If the task is objective with a clearly correct response (with all other responses being wrong), then the cost to the individual of an error is high, whereas if the task is one where objectively correct responses cannot be determined, then the cost of making an error is low. The second dimension concerns whether the responses are socially anchoring. If the response defines the individual in terms of a particular group membership, then it is socially anchoring, whereas if the response does not define an individual in terms of a particular social category, then the task is not socially anchoring. These two dimensions yield four quadrants, each of which is associated with different psychological processes involved in conflict elaboration.

Conflict elaboration theory attempts to explain many social influence phenomena, across many social situations, within a single theoretical framework. One of these quadrants is particularly relevant to the present discussion, as it is synonymous with the typical majority and minority influence research scenario that involves subjective tasks (concerning attitudes/opinions) that are socially anchoring. The conflict associated with a source in this situation is determined by the meaning attached to it in terms of in-group or out-group membership. When the source is the in-group, as one may assume a majority may be, then normative influence would be

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2 Research in other quadrants has, however, proliferated, such as when the task has a clear objective answer and the source introduces a “conflict of competences” (see Butera and Mugny, 1995; Butera et al., 1996; Legrenzi et al., 1991; Quiamzade et al., 2006).
increased and conformity to the majority position will occur with little need to consider the content of the majority message. This is similar to Moscovici’s (1980) description of the comparison process for majority influence. However, it is possible that a majority might lead to a latent influence in a specific situation where there is “... both an intense process of self-categorization and an identification conflict” (Pérez and Mugny, 1996, p. 204). In this situation, a fear of loss of majority membership or reducing group cohesion can lead to message evaluation.

When the source is an out-group such as a minority, and thereby associated with negative connotations, then agreement would be threatening to self-image, and an “identification conflict” arises. Private and indirect influence can occur through a process of dissociation between social comparison and validation, whereby targets of influence resolve the intergroup conflict because “Only then can subjects focus their attention on the content of the minority position” (Mugny et al., 1995, p. 166; see also Falomir et al., 2000; Quiamzade et al., 2003). The Conflict Elaboration Theory, in this specific situation, proposes hypotheses similar to those of Moscovici and suggests that a majority source leads to minimal processing of its message, whereas a minority source (especially when it has out-group status) can lead to detailed consideration of its message especially when social comparison processes are weak.

2.2.3. The context/categorization theory

The next theory we will consider in this section is the context/categorization theory developed by Crano and colleagues (Alvaro and Crano, 1997; Crano, 2001, in press; Crano and Alvaro, 1998a,b; Crano and Chen, 1998; Crano and Hannula-Bral, 1994). This model identifies two processes that are important in determining whether there is direct or indirect influence: message elaboration and source derogation. The model proposes a number of contingency factors (including, in-group vs out-group status, subjective vs objective task, involving vs uninvolving issue). The model also makes an important distinction between situations that involve attitude formation (where no prior attitude existed) and attitude change (Crano, in press).

The model specifies some situations when a majority or minority source can lead to message elaboration. For example, if the message concerns weak or unvested attitudes, an in-group minority can be persuasive because it is perceived by majority members as being distinctive, and this leads to message elaboration (in a manner similar to that proposed by conversion theory). If the minority is part of the in-group, it is unlikely to be derogated by the majority because the attitude dimension has little implication for in-group membership. Majorities, however, are unlikely to lead to much influence because the majority is not distinctive and therefore does not trigger message elaboration. If the message concerns central or vested attitudes, targets of in-group minority influence are wary of being identified with the minority position, yet there is
a reluctance to derogate other in-group members. This leads to what Crano and Alvaro (1998a) term the “leniency contract,” which allows the target to elaborate on the in-group minority’s message without source derogation, “. . . open-mindedly, with little defensiveness or hostility” (Crano and Alvaro, 1998a, p. 180), and this can lead to indirect attitude change. In the case of out-group minorities, however, the source is derogated, resulting in little direct or indirect influence. If the message relates to important group-relevant dimensions, there can be compliance without message elaboration leading to influence on both a public or direct level. Majorities can lead to message elaboration when two situations occur. First, when the majority is “self relevant” (i.e., it is important to people’s social identity) and second, when the majority is a “legitimate” source (i.e., the majority is seen as a credible in relation to the message issue).

2.2.4. Dual role model

The final contingency model we consider is the Dual Role Model proposed by De Dreu, De Vries, and colleagues (De Dreu, 2007; De Vries et al., 1996). The approach relies upon similar assumptions as the objective consensus approach (Mackie, 1987) and the convergent-divergent theory (Nemeth, 1986) approaches to majority and minority influence described earlier.

In the case of majority influence, people find identification with the majority group attractive and therefore, it is both important and relevant that they process the majority’s message to understand their position (and why they hold a position different from the majority). In this case, the majority leads to convergent thinking (i.e., focusing on the specific issues contained in the arguments) resulting in more attitude change on a direct/public than an indirect/private level.

In the case of minority influence, people find identification with the minority group unattractive, and consequently it is neither important nor relevant to understand the minority position. In most cases, the minority position is rejected unless there is some aspect of the context or of the minority itself that triggers systematic processing. Whether a minority source leads to systematic processing relies upon a range of contextual factors (e.g., topic relevance, De Dreu and De Vries, 1996; comparison focus, De Dreu and De Vries, 1993; historical growth of source size, Gordijn et al., 2002) or on minority-specific characteristics (e.g., displaying a positive behavioral style in the way described by Moscovici, 1976) that “. . . make it difficult or impossible to further neglect the minority’s discrepant message” (De Vries et al., 1996, p. 158). If any of the above factors are present (see De Vries et al., 1996 for additional examples), then this encourages people to engage in divergent thinking (i.e., focusing on a wide range of issues other than those presented in the arguments). Because people do not wish to identify with the minority, the results of message processing
will be greater attitude change on an indirect/private than a direct/public level (see also De Dreu et al., 1999).

2.3. Summary of approaches
In comparing these theoretical perspectives, one needs to distinguish between the amount and type of cognitive activity proposed for majority and minority influence. We consider predictions for each of these dimensions separately for main effects and contingency models.

2.3.1. Main effects models
For the main effects models (see Table 5.1), conversion theory clearly predicts that a minority source will result in a greater amount of cognitive activity than a majority source, whereas the objective consensus approach predicts the opposite. The convergent-divergent theory makes no specific predictions concerning the different amounts of cognitive activity, but suggests that each source leads to considerable cognitive activity (but with a different focus). With regard to the type of cognitive processes, the theories make different predictions according to the source of influence. All three perspectives would agree that a majority can cause influence, but for conversion theory, this would be due to the desired relationship with the source without considering, in depth, the majority arguments. In contrast, both the objective consensus approach and the convergent–divergent theory argue that majority influence is determined by detailed processing of the majority’s message, but the objective consensus approach makes no distinction between message- and issue-relevant thinking, while the convergent–divergent theory predicts that majority influence is determined only by message-relevant thinking. The biggest differences between the theories emerge when we consider minority influence. According to conversion theory, when exposed to a minority, individuals process its arguments and think of pro- and counter-arguments to assess its validity. By engaging in these thought processes, individuals begin to see the logic of the minority’s position and can be influenced by it (assuming that its position has some logic, and its arguments are compelling). The objective consensus approach, by contrast, proposes that the motivation to process the minority position is low and, as a consequence, the minority arguments are not analyzed in detail. Finally, convergent–divergent theory argues that a counter-attitudinal minority induces issue-relevant rather than message-relevant thinking, a systematic consideration of issues associated with the minority position but not stated by it explicitly.

2.3.2. Contingency models
In terms of the amount of message processing, the source-position congruity approach predicts that both a majority and a minority can lead to message processing of its arguments in different situations. Both sources will lead
to more message processing when the source-position is imbalanced (i.e., counter-attitudinal majority/pro-attitudinal minority) than when the source-position is balanced (i.e., pro-attitudinal majority/counter-attitudinal minority). The types of processes underlying these effects are similar to those employed in the objective consensus approach—when the situation is imbalanced this breaks the consensus heuristic, which is surprising and counter-intuitive, and this leads to an evaluation of the source’s arguments to understand the imbalance. In the conflict elaboration theory, in the particular situation we identified (subjective tasks where responses define group membership), the prediction is similar to conversion theory: message processing only for the minority source. The context/categorization theory predicts message processing for both a majority (when self-relevant to group membership and it is seen as a legitimate source) and minority (when it has in-group status to the recipients of influence and attitudes are unvested). Finally, the dual role model predicts message processing for both a majority source (when majority group membership is attractive) and the minority (when contextual factors draw attention to its arguments). However, the focus of the message processing differs with majority and minority influence leading to convergent versus divergent thinking respectively resulting in differences in attitude change on different levels of influence.

2.3.3. Summary
To summarize, we can categorize the predictions made by models reviewed above in terms of which source they predict will lead people to attend to, and scrutinize, the source’s arguments

- only a majority source (objective consensus approach, convergent-divergent theory)
- only a minority source (conversion theory, conflict elaboration theory when in subjective tasks/socially anchoring quadrant)
- both majority and minority sources dependent upon contingency factor(s) (source-position congruity model when counter-attitudinal majority and pro-attitudinal minority; context/categorization theory when majority is self-relevant and legitimate, and minority is part of in-group and topic concerns uninvested attitudes; dual role model when majority group membership is highly attractive and minority occurs in context that focuses attention on message and it cannot be ignored).

3. Research Examining Message Processing

I dislike arguments of any kind. They are always vulgar, and often convincing.

A large literature has emerged comparing a wide range of factors related to majority and minority influence. While much of this literature does not directly examine the level of message processing directly, it does give important insights into which source is associated with detailed scrutiny of the arguments. We briefly describe some of the key studies in this literature in relation to: focus of attention, types of thoughts, content of thoughts, recall of source arguments, and outcome of influence (attitude and task performance).

A few studies have directly examined differences in the focus of attention following majority and minority influence. Some of these studies give limited support to the notion that perceivers pay more attention to minority than majority sources, also reporting some evidence for greater attention to the majority than the minority source (Campbell et al., 1986; Guillon and Personnaz, 1983; Tesser et al., 1983).

A number of studies have examined the types of thoughts people generate following exposure to a majority or a minority (by asking participants to list thoughts they had while reading the source’s arguments). There is some evidence suggesting differences in the quantity and quality of thinking following majority and minority influence, but the results have been inconsistent (e.g., Alvaro and Crano, 1997; De Dreu and De Vries, 1993, 1996; Maass and Clark, 1983; Mackie, 1987; Martin, 1996; Mucchi-Faina et al., 1991). A more successful technique has been to examine the content of thoughts, with some evidence showing that minority influence led to issue-relevant thinking, whereas majority influence led to message-relevant thinking (e.g., De Dreu and De Vries, 1993; De Dreu et al., 1999; Trost et al., 1992). Finally, other experiments have examined the strategies people employ following majority and minority influence. For example, there is evidence that minority influence leads to the use of multiple strategies in solving problems whereas majority influence leads individuals to focus on the majority-endorsed strategy (e.g., Brodbeck et al., 2002; Butera et al., 1996; Legrenzi et al., 1991; Martin and Hewstone, 1999; Mugny and Pérez, 1991; Nemeth and Kwan, 1985, 1987; Peterson and Nemeth, 1996).

Another way to examine the types of processes involved in majority and minority influence is to examine the recall of the source’s arguments. It might be reasoned that the more a person processes the source’s arguments, then the greater should be the recall of those arguments. Whereas some studies showed greater recall of a minority message (e.g., Moscovici et al., 1981; Nemeth et al., 1990), other studies revealed greater recall for a majority message (e.g., Mackie, 1987; Maass and Clark, 1983; Trost et al., 1992), and some studies showed no difference in recall between a majority and minority (e.g., Alvaro and Crano, 1997). One of the problems in this research is that the recall measures were often taken at the end of the experiment, with many dependent variables intervening between message exposure and the recall, thus making it difficult to determine accurately the effects of source
on recall. Furthermore, the assumption that message recall is an indicator of the extent of message processing has been questioned by some attitude researchers (e.g., Eagly and Chaiken, 1993).

Another method to assess the processes involved in majority and minority influence has been to examine the outcome of influence, that is, the extent to which a majority or minority leads to a change in participants’ attitudes or improved performance on a task. One might assume that the consequence of engaging in detailed message processing is greater agreement with the source’s position or improved performance on a task. A large number of experiments have examined the effects of majority and minority influence on attitudes and attitude change. The potential problem with this assumption, however, is that attitude change can be due to public compliance without detailed appraisal of the source’s arguments. Researchers have therefore developed methodologies to examine the impact of majorities and minorities beyond the public/direct level to examine influence on a private/indirect dimension which might be a better reflection of people’s true attitudes. In a review, Maass et al. (1987) identified four dimensions on which attitude change to a majority and minority have been examined:

a. time—influence measured immediately following exposure to the source versus influence measured latter in time (e.g., Crano and Chen, 1998; Moscovici et al., 1981)

b. specificity—influence specific to the message versus influence that goes beyond the message and considers a wider set of issues. This dimension is commonly referred to as “direct” and “indirect” influence, respectively (e.g., Alvaro and Crano, 1997; Falomir et al., 2000; Mackie, 1987; Moscovici et al., 1981; Mugny and Pérez, 1991)

c. privacy—responses which are made in public versus those that are made anonymously and in private (e.g., Maass and Clark, 1983; Martin, 1988a,b) and

d. awareness—participants are aware of the connection between source message and influence dimension versus not being aware of this connection (e.g., Brandstätter et al., 1991; Martin, 1998; Moscovici and Personnaz, 1980, 1991; Mugny, 1984).

Overall, research tends to support conversion theory’s prediction of greater public/direct influence for a majority and greater private/indirect influence for a minority (Martin et al., 2008b). A meta-analysis of 97 studies by Wood et al. (1994) also supported this conclusion, concluding that “Minority impact was most marked on measures of influence that were private from the source and indirectly related to the content of the appeal and less evident on direct private influence measures and on public measures” (p. 323). Furthermore, minorities had as much, if not more, impact on indirect measures of influence as did majorities.
Another set of studies has examined the effects of majority and minority influence on task performance. Most of these experiments test Nemeth’s (1986) prediction that minority influence leads to divergent thinking, which entails a consideration of a wide range of issues related to the topic of the source’s message, and this can lead to more original and creative thinking. The results of many experiments tend to support Nemeth’s theory. In experiments where task performance benefits from divergent thinking, minority influence leads to better performance than majority influence (e.g., Martin and Hewstone, 1999; Nemeth and Kwan, 1987; Nemeth and Wachtler, 1983), whereas on tasks where performance benefits from convergent thinking, majority influence leads to better performance than minority influence (e.g., Nemeth et al., 1992; Peterson and Nemeth, 1996).

Finally, minority influence has been shown to lead to more creative and novel judgments compared to majority influence (e.g., Mucchi-Faina et al., 1991; Nemeth and Kwan, 1985; Nemeth and Wachtler, 1983; Volpato et al., 1990; see also Martin, 1996).

To summarize, a range of different methodologies have been employed to examine majority and minority influence with the aim of determining the underlying processes. However, most of these studies did not manipulate variables to examine directly the amount of message processing. A more useful methodology to identify whether message processing has occurred, developed in the persuasion area, is to vary the quality of the arguments in the message (see Petty and Cacioppo, 1986). Manipulating argument quality to determine message processing was first employed by Petty et al. (1976). If individuals process a message in detail, that is they pay close attention to the content of the arguments, they should be more influenced by strong and persuasive arguments than by weak and nonpersuasive arguments—we refer to this as the argument quality effect. By contrast, if individuals do not process the message, and therefore do not attend to the content of the arguments, then argument quality should have a small (or no) impact on attitudes. By crossing source status with argument quality, one should be able to detect whether either, both, or neither source leads to systematic processing of the message. A reliable interaction between source status and argument quality can indicate different processes underlying majority and minority influence processing (see Kruglanski and Mackie, 1990).

We now present a detailed review of studies that have manipulated both source status and argument quality to determine which source is associated with message processing. Our selection criteria for the review were that the experiment (a) was concerned with a social attitude or opinion, (b) manipulated both source conditions (majority vs minority), and (c) exposed participants to a message containing either strong or weak arguments as a within- or between-subjects design. Some studies that did not fit these criteria, principally because they did not manipulate both source conditions (e.g., Baron and Bellman, 2007; Gordijn et al., 2002), or they exposed
participants to both majority- and minority-endorsed arguments, making it difficult to attribute attitude change to a particular source (e.g., Garlick and Mongeau, 1993), are not discussed. In presenting the review, we focus mainly on the findings concerning argument quality. The reader should be forewarned that the review contains many conflicting findings and that we try to make sense of these apparently inconsistent findings when we present our model in the next section. In presenting the review, we have sorted the studies into those showing first, message processing only for a majority source; then, message processing for both a majority and minority; and finally, message processing for a majority and minority under different situations.

3.1. Message processing for majority source only

A number of experiments have found evidence to suggest that only the majority leads to detailed message processing. Baker and Petty (1994, Experiment 1) had university students read either a strong or weak counter-attitudinal message concerning a “... mandatory 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” (p. 8). Participants were told that either 78% (majority) or 12% (minority) of students in universities in their state supported the proposal. After indicating their attitude towards the message, participants completed a thought-listing task whereby they listed all the thoughts they had while reading the message (after this they indicated whether each thought was positive, negative, or neutral towards the topic). There was a reliable interaction between source status and argument quality on posttest attitude scores. While there was no difference between strong and weak messages in the minority condition, there was a tendency for the strong message to have greater influence than the weak message in the majority condition. The thought-listing data were used to calculate a message-congruent thought index (ratio of positive to positive and negative thoughts, such that higher scores show a greater proportion of thoughts in the direction of the message); however, this index did not show a reliable interaction, although the pattern was similar to the attitude data.

Gordijn (1998, Experiment 1) gave Dutch University students a message in favor of courses in the university being taught in the English language. The message was attributed to either a numerical majority or minority of fellow students, and participants read either strong or weak arguments. Gordijn found a reliable interaction between source status and argument quality for posttest attitudes. The interaction showed a reliable difference between the strong and weak messages (argument quality effect) in the majority condition, but not the minority condition, suggesting participants had processed only the majority message.
3.2. Message processing for both majority and minority source

Several experiments have found message processing for both a majority and a minority source. For example, Bohner et al. (1998) had participants read a report of a meeting where a communicator gave either strong or weak arguments that were anti-animal experimentation (which was known to be counter-attitudinal to the participants) and they were told that either 80% (majority) or 20% (minority) of people held the same view as the person whose arguments they read. The researchers also manipulated the “distinctiveness” of the source’s minority (majority) position by informing recipients either that the source usually held minority (majority) positions with respect to most topics (low distinctiveness), or that the source’s minority (majority) position was unique to the current topic (high distinctiveness). On the basis of Kelley’s (1967) attribution theory, Bohner et al. proposed that high distinctiveness might “… increase the likelihood of attributions to a position’s external validity, and … lead to more positive source-related attributions and judgments” (p. 856) and presumably increase message processing. The results showed that attitudes were affected by both argument quality and distinctiveness (high > low) for both a majority and minority source.

Crano and Chen (1998, Experiment 3) had participants read a message in favor of a university service program, which contained either strong or weak arguments (a topic and messages employed extensively in the persuasion literature; see Petty and Cacioppo, 1986). Outcome relevance was manipulated by telling participants that the new program would be introduced either the following year (high relevance) or in 8 years time and therefore after participants had completed their course (low relevance). Attitudes towards the issue of a university service program were measured at three times: before message exposure, immediately after message exposure, and 1 week after message exposure. Unexpectedly, outcome relevance did not affect the attitude scores. There was, however, a reliable argument quality effect for both the majority and minority conditions, suggesting that participants had systematically processed the message for each source. In addition, there was a reliable source effect, showing that the majority had greater impact than the minority (the interaction between source status and argument quality was not reliable). When examining the attitude scores taken 1 week after the experiment, there was no effect of argument quality, but the source effect had persisted.

The final two experiments, by Erb et al. (1998), differed from others in the literature in two respects: first, they manipulated argument quality as a within-subjects factor; second, the researchers deliberately used issues on which participants would have no prior attitude (see Erb and Bohner, 2007); thus, the studies can best be classified as dealing with attitude
formation rather than change. In the first experiment, German students read a message that was in favor of building a tunnel under Rotterdam harbor in the Netherlands. The position was presented as being either high (85%) or low (15%) in consensus. The message contained six arguments; from pre-testing one item was considered to be strong, because it was highly persuasive (concerning resident issues) whereas another was considered to be weak and unpersuasive (concerning economy issues). Attitudes were assessed towards the building of the tunnel and also the specific items for which strong and weak arguments were presented in the message. Overall, the majority led to more positive attitudes towards the building of the tunnel than did the minority. Further analyses showed a reliable argument quality effect (in this case a difference between attitudes towards the issue raised in the strong and weak arguments) for the majority, minority, and control (where no consensus information was given) conditions. The lack of a reliable interaction between consensus condition and argument quality showed that the difference between strong and weak arguments was the same in all three experimental conditions. A measure of thought valence obtained from the thought-listing task (number of pro-message thoughts minus number of anti-message thoughts) mediated the relationship between consensus level and general attitudes. A second experiment (Erb et al., 1998, Experiment 2) concerning the development of a new holiday resort area in Brazil, also manipulated the order of presentation of whether source information preceded or followed the message, and replicated the finding (irrespective of whether the source information had been given before or after reading the message). As was the case in the first experiment, thought valence mediated attitudes when consensus was given before the message.

3.3. Message processing for either majority or minority in different situations

In this final section, we review a number of experiments showing message processing for both a majority and minority source, but under different situations. De Dreu and De Vries (1993, Experiment 2) were the first researchers to cross source status and argument quality. They also manipulated the level of evaluation comparison of the message. Dutch college students were exposed to a counter-attitudinal message that was in favor of the introduction of admission exams for university. The participants were told that the message was supported by either 82% (majority) or 18% (minority) of the population and they read a set of strong or weak arguments concerning the introduction of admissions exams for university.

The information processing manipulation concerned how participants evaluated the source’s message. Participants judged how “correct” they thought their own attitude and that espoused in the message were in one of two different ways. In one condition, they divided a score of 100 “points
of correctness” between their own and the message position (comparative evaluation condition) which the authors reasoned should increase comparison between self and source, necessitating the processing of the source message. In the other condition, participants allocated a score out of 100 “points of correctness” for both self and source, independently (noncomparative evaluation condition) which should not encourage comparison, and therefore participants should be able to avoid systematically processing the source’s message. Attitudes towards the topic were measured before and after message exposure and the results are reported as change scores.

The reliable three-way interaction between the independent variables showed a differential pattern of attitude change between the evaluation conditions. In the comparative evaluation condition, there was a reliable argument quality effect in the minority (strong > weak) but not the majority condition. In the noncomparative evaluation condition, the opposite pattern was observed: a reliable argument quality effect for the majority but not the minority source. Notwithstanding the important contribution of this experiment, we raise a methodological issue concerning the impact of the strong/weak arguments. The pattern of attitude change scores showed that three of the eight experimental cells showed a negative change (indicating they were less in favor of admissions exams than they were at pretest) whereas two further cells showed no change. This leads us to wonder whether the strong and weak arguments did, in fact, have a differential impact on attitudes. Furthermore, the findings in the critical conditions of comparative/minority and noncomparative/majority showed a different pattern between strong and weak messages (due to a large negative change for the weak message in the former, and a large positive change for the strong message in the latter); these results suggest that the underlying processes might not have been the same.

Baker and Petty (1994, Experiment 2) reported an experiment that crossed source status with argument quality and also manipulated the source-position congruity. As described earlier, Baker and Petty argue that participants are more likely to process a message systematically when the source-position is incongruent or “imbalanced” (i.e., counter-attitudinal majority/pro-attitudinal minority) than when source-position is congruent or “balanced” (pro-attitudinal majority/counter-attitudinal minority). To address the issue of balanced versus imbalanced situations, Baker and Petty (1994, Experiment 2) conducted an experiment that crossed counter- and pro-attitudinal messages with majority and minority status. The topic and message were similar to those used in the first experiment described in an earlier section. The pro-attitudinal message argued that performance of university services would lead to a full tuition break (message heading, “Majority [or Minority] Favors Tuition Break,” p. 12) whereas the counter-attitudinal message proposed an increase in tuition for those that did not participate (message heading, “Majority [or Minority]
Favors Tuition Increase,” p. 12). Given that participants in a pilot study thought that fewer than 55% of people would support the pro-message position, and that the mean pretest agreement was only marginally above the scale midpoint \((M = 5.44\) on a 9-point scale), assumptions of majority/minority-held positions were far from universal (a point supported in the source manipulation check for the main study where perceived support for the pro-message was only 54.5%, although 78% had, in fact, in the experimental manipulation supported this position).

The three-way interaction between the independent variables was reliable. The results for post-influence attitudes supported Baker and Petty’s predictions. There was a reliable argument quality effect in the imbalanced conditions for both majority and minority sources, and no effect of argument quality in the balanced conditions. The results for the proportion of positive thoughts supported the attitude data. In the balanced conditions, there was no effect of argument quality in the proportion of positive thoughts. In the imbalanced conditions, as expected, argument quality predicted the proportion of positive thoughts, which in turn predicted attitudes. This finding further supports the idea that when the situation is imbalanced, for either a majority or minority, this leads to message processing which affects attitudes. Shuper and Sorrentino (2004) conducted an almost exact replication, using the same messages in a sample of Canadian students. However, they found no reliable effects of the independent variables on attitude scores.

Like the experiment by Crano and Chen (1998, Experiment 3) reported earlier, Kerr (2002) examined outcome relevance (low vs high), and manipulated a second factor termed source advocacy (active vs passive). The topic of the study was the familiar one of senior comprehensive exams for university students (cf. Petty and Cacioppo, 1986). Outcome relevance was manipulated by informing participants that these exams would be implemented before they graduated and therefore would apply to them (high relevance), or in 4–5 years time and therefore after they graduated (low relevance). Source status was manipulated in a novel way—participants were told either that the message was supported by a large majority (87%) of students at the university (majority) or that it was opposed by a large majority (87%) of students at the university (minority). Normally the minority position is defined by having a low percentage of support, and it is unusual to define the minority with reference to having the opposite position to the majority.

For participants in the low relevance condition, where one would not expect the topic to induce message processing, there was no effect of argument quality for the majority but there was for the minority—especially when the minority was “active” in orientation (i.e., “are aware of the relative popularity of their positions, are interdependent with others in the group, and do expect to interact with others in the group in a context
requiring them to reveal their opinion” (p. 472). In the high outcome relevance condition, where participants should be motivated to process the message, there was an argument quality effect for both source conditions, indicating that message processing had occurred, and a trend towards a source effect, the majority having more influence than the minority (replicating Crano and Chen, 1998, Experiment 3).

Erb et al. (2002) reported two studies showing that under high conflict, minority messages were processed more extensively than majority messages, whereas under low conflict, the opposite was true. Experiment 1 examined strong and weak arguments as a within-subject variable, as they did in their previous research (Erb et al., 1998), and also examined participants’ prior attitude. German students were exposed to a message that advocated the building of a road tunnel under the river Rhine, the construction of which was planned for the following year. Initially, participants read a summary of the topic to induce either an opposing attitude or a moderate attitude towards the topic. The source information was manipulated by a report of agreement with the tunnel from a local meeting on the issues—either 87% (majority) or 13% (minority). The message contained five arguments; the second argument (concerning advantages for residents) was strong whereas the fourth argument (concerning economic benefits) was weak. There was a reliable interaction between the independent variables (prior attitude, source status, argument quality). The pattern of means suggests that argument quality had a bigger impact for the minority than the majority when participants held opposing attitudes to the source and for the majority than the minority when they held moderate attitudes to the source.

The final experiment was also conducted by Erb et al. (2002, Experiment 2). German participants were exposed to a message advocating the fluoridation of drinking water. Pilot work had shown that participants were either strongly against or moderate towards this issue which provided a naturally occurring situation in which to examine the moderating role of opposing versus moderate attitude on majority and minority influence. The participants were informed about a discussion on the topic by representatives of public health insurance plans where either 88% (majority) or 12% (minority) favored the fluoridation of drinking water, and then read a set of strong or weak arguments.

The predicted three-way interaction between the independent variables (prior attitude, source status, argument quality) was reliable. The results supported the authors’ prediction. When participants held an opposing attitude, there was an argument quality effect for the minority, but not the majority source. However, when the participants held a moderate attitude, the opposite pattern was observed; there was an argument quality effect for the majority, but not the minority source. A similar three-way interaction was also found for a measure of thought valence, and the comparison between strong and weak messages was similar to the attitudes data.
In conditions where message processing was predicted (opposing attitude/minority and moderate attitude/majority), the level of thought valence mediated attitudes. However, no mediation was found in conditions where message processing was not predicted (opposing attitude/majority and moderate attitude/minority). This is compelling evidence that the argument quality effect was due to the sources differentially affecting participants’ elaboration of the message which, in turn, affected their attitudes.

3.4. Integration of findings

The above review has described several experiments that have crossed source status and argument quality to determine if either, neither, or both source conditions lead to systematic processing of its message. A variety of findings have shown message processing, only for a majority, for both a majority and minority, and for each source under different conditions. This pattern of results does not give clear support for any of the models described earlier. We have proposed that many of these seemingly inconsistent findings might be explained with reference to the types of topics and experimental manipulations employed (Martin and Hewstone, 2003b).

Interestingly, those experiments that found an argument quality effect only for a majority source, suggesting that message processing had occurred (supporting the objective consensus approach), employed messages about a topic that had a very high impact and would be seen as being undesirable both to the source and the message recipients: delivering courses to Dutch University students in English (Gordijn, 1998, Experiment 1), a mandatory community service program to maintain tuition rates for undergraduate student participants (Baker and Petty, 1994, Experiment 1). As Martin and Hewstone (2003b) note, such topics might introduce a negative personal outcome. Under the atypical situation when a negative personal outcome is proposed, it is not surprising that a counter-attitudinal majority arguing for a negative outcome invoked greater message scrutiny than did a minority. When a majority endorses such a position, it is likely to raise suspicion or curiosity in the participants (“why are the majority arguing against my, and their, interest?”) and this may result in closer examination of the message. When a minority argues against its self-interest for a negative outcome, however, its message may not be scrutinized for a number of reasons: such as, the minority’s deviance might be attributed to an underlying bias; because minority-supported positions are unlikely to be adopted; or to protect one from identifying with a (deviant) minority group.

For those experiments finding an argument quality effect for both a majority and minority, suggesting that both sources led to systematic message processing, most employed experimental instructions that potentially increased participants’ motivation to process the source’s arguments.
Crano and Chen (1998, Experiment 3) manipulated outcome relevance by telling participants that a university service program would be introduced either the following year or in several years time. Unexpectedly, outcome relevance did not affect the attitude scores. The authors reasoned that “... the manipulation was superfluous. By virtue of the topic’s relevance for their social identities, participants were already involved in the university service issue well in advance of the manipulation ... Natural involvement was already high, thereby rendering the manipulation inconsequential.” (p. 1448). This conclusion is supported by the results of the outcome relevance manipulation. Although there was a reliable difference between the low versus high relevance conditions, the mean for the low relevance condition was very near the scale midpoint—participants in both outcome relevance conditions believed the issue was personally relevant to them.

The Erb et al. (1998, Experiments 1 and 2) studies included task instructions that explicitly encouraged message processing. In the first experiment, the participants were told “... to read the text attentively because later they would be asked some questions about it” (p. 623), whereas in the second experiment they were told “... to evaluate two texts as part of a study on text comprehension and were asked to read the texts attentively to ensure systematic processing” (p. 627). By directing participants to carefully attend to the arguments, the experimenters encouraged systematic processing of the message for both source conditions.

We now turn to those experiments finding message processing for a majority and minority source in different situations. De Dreu and De Vries (1993, Experiment 2) employed a message that could be seen to propose a negative personal outcome as described earlier (in favor of the introduction of admission exams for university). On the basis of the above analysis, we would predict that when the source argues for a negative personal outcome, there should be systematic processing only for the majority source. The experiment also included a manipulation that did or did not encourage participants to compare their own and the source's position (comparative and noncomparative conditions). In the noncomparative condition, De Dreu and De Vries found an argument quality effect only for the majority condition, which is consistent with other experiments employing a topic arguing for a negative personal outcome (Baker and Petty, 1994, Experiment 1; Gordijn, 1998, Experiment 1). However, in the comparative condition, where participants' awareness of their own position, and how it differs from the source position, would be salient, one might expect participants to try to resist influence from the source (indeed there was less attitude change in the comparative than the noncomparative conditions). In the comparative condition, the only experimental condition that differed from the others was the minority/weak message combination which showed a large change away from the minority’s position.
Baker and Petty (1994, Experiment 2) manipulated source/position congruency by creating balanced versus imbalanced settings. This was achieved by varying the direction of the message (pro- vs counter-attitudinal), by reversing the position advocated in the message (concerning students performing university services). However, the experiment not only varied the direction of message (pro- vs counter-attitudinal), but also the desirability of outcome. The authors state that the pro-attitudinal position “... seemed as if it would only have benefits for students” (p. 12) and because the counter-attitudinal message took the opposite position, it would be against the participants’ interests (a negative personal outcome). With the pro-attitudinal message (in favor of participants’ interest), there was message processing only for the minority source. However, with the counter-attitudinal message, that might have induced the negative personal outcome, the results were consistent with the experiments discussed above, showing message processing only for the majority source.

The final experiments by Erb et al. (2002, Experiments 1 and 2) show that the initial attitude, in relation to the source, moderated when message processing would occur. When participants initially had opposing attitudes there was message processing only for the minority source but when they held moderate attitudes there was message processing only for the majority source. However, in these experiments, it is not clear what factor actually moderated message processing. There are many differences between people who hold opposing attitudes compared to those who hold moderate attitudes, other than their prior attitude position (such as, attitude strength, certainty, centrality—to name a few) that might affect information processing strategies. Indeed, as noted by Stroebe (in press), there is no theoretically compelling reason why people with a moderate attitude should process a majority message more than a minority one.

To summarize, the above analysis shows that some of the inconsistencies in the literature can be potentially explained by taking into account the topic of influence and the experimental procedures employed. In experiments that employed a topic that might have proposed a negative personal outcome, there was message processing only for a majority source (Baker and Petty, Experiment 1; Baker and Petty, Experiment 2, counter-attitudinal message; Gordijn, 1998, Experiment 1). In experiments that did not induce a negative personal outcome, there was message processing only for the minority source (Baker and Petty, 1994, Experiment 2, pro-attitudinal message). In experiments finding message processing for both a majority and minority, the topics used were high in personal relevance (e.g., increase in tuition fees, Crano and Chen, 1998, Experiment 3; Kerr, 2002), or the studies deliberately used instructions that explicitly encouraged systematic processing of the source’s arguments (e.g., Erb et al., 1998, Experiments 1 and 2). Interestingly, in all these experiments, the predicted argument quality effect was found for both majority and
minority source conditions, and there was also a main effect for source status (majority > minority).

We recognize that this is a post hoc interpretation of these findings and that not all experiments fit in with the analysis (e.g., Bohner et al., 1998). However, there does seem some support for the view that when the situation does not introduce any processing biases (such as, negative personal outcome, high personal relevance) there is message processing only for a minority (supporting conversion theory). Majorities can also lead to message processing, and therefore attitude change, but only when the situation introduces a factor that motivates people to pay closer attention to the content of the majority’s arguments.

4. The Source-Context-Elaboration Model of Majority and Minority Influence

You see, it is a very dangerous thing to listen. If one listens one may be convinced . . . (Oscar Wilde, An ideal husband; reprinted in Oscar Wilde, The importance of being Earnest and other plays. Harmondsworth, UK: Penguin, 1988, p. 163).

Our review of the relevant literature suggests that both a majority and minority can lead to message processing under different contexts. However, it appears that for majorities to lead to message processing, there must be some aspect of the context that motivates people to pay close attention to the content of their arguments. It is the interplay between source status and the contextual factor(s), that might encourage or constrain message processing, that forms the central theme of our theoretical model. We refer to our theoretical framework as the source-context-elaboration model (SCEM). The model predicts that a majority and minority can lead to message elaboration in specific contexts. The model proposes a contingency framework where message elaboration is contingent upon source status (majority vs minority) and the “context” in which influence occurs, which includes both cognitive and motivational factors. Our theoretical framework attempts to specify (a) the types of processes involved in majority and minority influence, (b) the contexts under which these processes occur, and (c) the consequences of these processes for people’s attitudes. Each of these aspects of the framework is described below.

4.1. Processes

Our model is based on an integration of aspects of Moscovici’s (1980) conversion theory and dual-process models of persuasion. We turn to dual process models of persuasion (Chaiken et al., 1989, Heuristic
Systematic Model, HSM, and Petty and Cacioppo’s, 1986, Elaboration Likelihood Model, ELM) as potentially providing a detailed analysis of the underlying processes involved in majority and minority influence (Maass and Clark, 1983). Although the ELM and the HSM make some different predictions (see Eagly and Chaiken, 1993; Visser and Cooper, 2003), they share some common assumptions. Both the ELM and HSM distinguish two strategies of information processing in persuasion settings. “Central-route persuasion” (ELM) or “systematic processing” (HSM) entails thinking carefully about persuasive arguments and other issue-related information. Systematic processing refers to a “... comprehensive, analytic orientation in which perceivers access and scrutinize all information input for its relevance and importance to their judgmental task” (Chaiken et al., 1989, p. 212); it can be biased or unbiased, depending upon motivational factors (processing goals). In order to engage in systematic processing, people have to be both motivated and able to process the source’s message. In situations where people are unmotivated and/or unable to process the source’s message, attitudes may be changed by “peripheral-route persuasion” (ELM) or “heuristic processing” (HSM), whereby systematic processing is minimal, and persuasion occurs due to some cue(s) in the persuasion environment (e.g., status of source) or use of simple heuristics (e.g., “the majority is always right”). Heuristic processing refers to a “... more limited processing mode that demands much less cognitive effort and capacity than systematic processing ... [it involves a] focus on that subset of available information that enables [respondents] to use simple, inferential rules, schemata, or cognitive heuristics to formulate their judgements and decisions” (Chaiken et al., 1989, p. 213).

Maass and Clark (1983) were the first to draw a parallel between Moscovici’s concepts of comparison and validation and those of nonsystematic and systematic processing respectively. Table 5.2 gives some of the original definitions of key processes proposed in conversion theory, the ELM and the HSM, although it should be acknowledged that there has been (understandably) some variation in these definitions over time. We have organized the definitions into those that predict elaboration of the source’s arguments and those that do not. With regard to processes that describe message elaboration (validation/central/systematic processing), there are common themes concerning (a) evaluation of the merits of the source’s arguments and (b) assimilation of the results of the evaluation to preexisting attitudes. In this situation, attitude change is a direct consequence of engaging in message–relevant thinking—the greater the message–relevant thinking, the greater is the corresponding attitude change. With regard to processes that do not involve message elaboration (comparison/peripheral/heuristic processing), there is somewhat less agreement amongst the theories but there are some common themes concerning (a) attention being drawn away from the content of the source’s arguments and (b) inferences are
Table 5.2  Definition of key processes

<table>
<thead>
<tr>
<th>Attention to message content</th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conversion theory (Moscovici, 1980)</td>
<td>Comparison process: [the target of influence will] “. . . concentrate all his attention on what others say, so as to fit in with their opinions or judgments” (p. 214)</td>
<td>Validation process: “… an examination of the relation between its responses and the object of reality . . . One will at the same time examine one’s own responses, one’s own judgments, in order to confirm and validate them” (p. 215)</td>
</tr>
<tr>
<td>Elaboration Likelihood Model (ELM: Petty and Cacioppo, 1986)</td>
<td>Peripheral processing: based on “. . . superficial analyses of the veracity of the recommendation. Acceptance or rejection of the appeal is not based on the careful consideration of issue-relevant information . . . but rather it is based on the issue or object being associated with positive or negative cues . . . or with the individual’s drawing a simple inference based on various cues in the persuasion context” (p. 13)</td>
<td>Central processing: “… directed at evaluating the merits of the arguments for a recommendation (p. 12) . . . typically result in new arguments, or one’s personal translations of them, being integrated into the underlying belief structure (schema) for the attitude object” (p. 12)</td>
</tr>
<tr>
<td>Heuristic Systematic Model (HSM: Chaiken et al., 1989)</td>
<td>Heuristic processing: involves a “. . . focus on that subset of available information that enables [respondents] to use simple, inferential rules, schemata, or cognitive heuristics to formulate their judgments and decisions” (p. 213)</td>
<td>Systematic processing: “… a comprehensive, analytic orientation in which perceivers access and scrutinize all informational input for its relevance and importance to their judgment task, and integrate all useful information in forming their judgments” (p. 212)</td>
</tr>
</tbody>
</table>
made concerning the validity of the arguments. In this situation, attitudes are changed via linking the source position to a positive external cue, but because no message scrutiny has taken place, the attitude change is superficial and there is no change in underlying attitudes.

We do not claim there is a perfect parallel between these processes but suggest that there is sufficient similarity to make some integration, in the context of majority and minority influence, worthwhile. On the basis of our integration of the above theories, and as applied to our model of majority and minority influence, we envisage two major forms of message processing: elaborative and nonelaborative processing. Elaborative processing involves five main stages: (a) attending to the content of the source’s arguments and trying to understand the underlying reasons why the source believes these arguments, (b) generating pro- and counter-arguments, (c) evaluating the merits of these arguments in the light of preexisting attitudes, (d) assimilating these new arguments into the attitude object, and (e) being aware of the consequences of these “new” attitudes to source group membership (and, when necessary, redefining group identification).

By contrast, nonelaborative processing involves none of the above stages and when it occurs preexisting attitudes remain intact. Sometimes nonelaborative processing can guide attitudes by a heuristic cue. Whether source status will act as heuristic cue depends upon the extent to which source group membership is psychologically important; that is, when majority group membership is desirable (e.g., it forms part of the person’s in-group) and/or minority membership is undesirable (e.g., it has deviant status). If majority/minority group membership is not psychologically meaningful, then we do not expect people to engage in elaborative processing, and existing attitudes are not changed.

Because information concerning source status typically precedes message exposure, then majority or minority endorsement will be a major determinant of the type of information processing people will engage in. Moreover, source status is likely to affect many aspects of the elaboration processes. For example, it could affect the focus of elaborative processing (on attitudes central to the source’s message and/or of attitudes related to the source’s message even when not mentioned in it); stimulate a range of processing goals (such as, accuracy, defence, and impression); lead to selective attention to different aspects of information (Frey, 1986; Nemeth and Rogers, 1996; Schulz-Hardt et al., 2000); and affect the recipients’ level of confidence in their attitudinal judgements (what the HSM refers to as the “sufficiency principle,” see Maheswaran and Chaiken, 1991).

There are two guiding principles concerning when people are influenced by a majority or minority. First, in many situations where there is a choice between agreeing with the majority or with a minority, most people will choose the former—which we refer to as the majority default option. This is because it is psychologically easier to comply with a majority-endorsed
position than it is to agree with a minority one. Most people wish to belong to majority groups, both for social acceptance and for consensual validation of attitudes and opinions, and also to avoid being categorized as part of a deviant minority. Agreeing with a minority intuitively entails rejecting majority-group status, expending considerable cognitive effort to assimilate the minority’s arguments into one’s attitude structure, and also becoming prepared to defend the minority position against the majority. In most situations, majority status can act as a heuristic cue (e.g., through assumptions that “several pairs of eyes are better than one,” “majority more likely to be correct,” “majority views prevail,” and so on) and this will lead people to comply with the majority, without changing their underlying attitudes, to satisfy their desire to be part of the majority group and for consensual validation of their opinions. While we believe that in most situations majority status might act as a heuristic cue, we can also envisage some, albeit rare, situations when minority heuristics might occur. Examples would be elite or high status minorities, minorities with lofty positions and/or special knowledge concerning the topic of influence, or when prior majority-endorsed decisions have proved unsuccessful.

The second guiding principle states that minorities will only lead to elaboration of their arguments, and therefore have influence, if they are “distinctive” in the eyes of the majority, and they are consistent and committed to their position—the minority behavioral style threshold. Numerous studies show the importance of the minority’s behavioral style, especially consistency, in determining the ability of the minority to influence the majority (see section on conversion theory above, Moscovici, 1976; Moscovici and Lage, 1976; Moscovici and Nemeth, 1974; Mugny, 1982 and also meta-analysis by Wood et al., 1994). In the absence of external factors increasing elaboration, the minority will not influence the majority unless this threshold has been exceeded.

4.2. Contexts affecting when processes occur

The second part of our theoretical framework specifies the “contexts” under which majority and minority influence will lead to either elaborative or nonelaborative processing. In common with dual-process models of persuasion, we propose that whether a source will lead to elaborative versus nonelaborative processing will depend upon where the context falls on an “elaboration continuum” (Petty and Cacioppo, 1986). The position on the elaboration continuum is determined by a range of dispositional (e.g., need for cognition, Cacioppo and Petty, 1982) and situational (e.g., relevance of topic, Johnson and Eagly, 1989) factors that affect people’s ability and/or motivation to engage in elaborative processing. In short, the elaboration continuum goes from “... no thought about the issue-relevant information presented, to complete elaboration of every argument, and complete
integration of these elaborations into the person’s attitude schema” (Petty and Cacioppo, 1986, p. 8). But how can one determine where a person is on the elaboration continuum? According to Petty et al. (2005), “… the location of the target of influence along the continuum is determined by a person’s overall ability and motivation to think about the issue, object, or person under consideration.”

Although the elaboration continuum is conceived to be a continuous variable, most research on the ELM has examined situations at the extremes of the elaboration continuum, from virtually no thinking about the message (low elaboration) to very detailed consideration of the content of the message (high elaboration) (Petty and Cacioppo, 1986). Relatively little consideration has been given to the situation between low and high levels of the continuum (intermediate elaboration) which is interesting precisely because it is the situation in which most persuasion situations occur (cf. Petty et al., 1999). Clearly, the definition of “intermediate” elaboration is based upon the target’s ability/motivation to think about the message and it is a relational one—it is between low and high elaboration situations.

The ELM provides some insights into the potential effects of source status at different levels of the elaboration continuum (see Petty and Cacioppo, 1984). Petty and colleagues referred to the “multiple roles” of majority/minority source status (Baker and Petty, 1994; Petty and Wegener, 1998). More specifically, they suggest that the effects of majority versus minority source status will vary along the elaboration continuum. For example, Petty and Wegener (1998) state that “… when the elaboration likelihood is low, majority/minority source status is most likely to serve as a simple cue … when people are unsure whether they should carefully scrutinize the message or not, majority/minority status can determine the amount of message scrutiny … when motivation and ability to process an incoming message are high, majority/minority status should impact persuasion primarily by influencing the nature of the thoughts that come to mind” (pp. 347–348). Thus, majority/minority source could influence attitudes as a peripheral cue (at low levels of motivation and/or ability), as a factor that influences the amount of scrutiny of the message (at more intermediate levels of motivation and/or ability)—although Petty and Wegener do not specify which source would have this affect), and as an argument, or through biased processing (at high levels of motivation and/or ability).

Drawing together these theoretical ideas, we make the following predictions concerning the effects of source status (majority vs minority) at three levels of the elaboration continuum (low vs intermediate vs high, see Table 5.3). When the elaboration context is low (e.g., the topic is low in personal relevance, presence of a distractor task), the motivation and/or ability to process the message is correspondingly low, leading to non-elaborative processing. In this context, attention focuses on the characteristics of the source and two possible outcomes can occur. If majority/minority
Table 5.3  Key comparisons concerning source-context elaboration model

<table>
<thead>
<tr>
<th>Elaboration situation</th>
<th>Low</th>
<th>Intermediate</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majority</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minority</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Majority</td>
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<tr>
<td>Minority</td>
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<tr>
<td>Majority</td>
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<td>Minority</td>
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<table>
<thead>
<tr>
<th>Process</th>
<th>Majority</th>
<th>Minority</th>
<th>Majority</th>
<th>Minority</th>
<th>Majority</th>
<th>Minority</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nonelaborative/Heuristic</td>
<td>Nonelaborative/Heuristic</td>
<td>Elaborative</td>
<td>Elaborative (sometimes plus Heuristic)</td>
<td>Elaborative</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Message processing</th>
<th>Majority</th>
<th>Minority</th>
<th>Majority</th>
<th>Minority</th>
<th>Majority</th>
<th>Minority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus of attention</td>
<td>≡ (None/Low)</td>
<td>Characteristics of majority</td>
<td>&lt; Content of arguments</td>
<td>Characteristics of majority/content of arguments</td>
<td>≡ (High)</td>
<td>Content of arguments</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Direct/public attitude change</th>
<th>Majority</th>
<th>Minority</th>
<th>Majority</th>
<th>Minority</th>
<th>Majority</th>
<th>Minority</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>Low</td>
<td>High</td>
<td>High</td>
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</table>

<table>
<thead>
<tr>
<th>Indirect/private attitude change</th>
<th>Majority</th>
<th>Minority</th>
<th>Majority</th>
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<tr>
<td>Low</td>
<td>Low</td>
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<td>High</td>
<td>High</td>
<td>High</td>
</tr>
</tbody>
</table>
group memberships are not important to the recipients of influence, and therefore holding a different attitude from the source does not affect self-identity, then there will be no attitude change for either the majority and/or minority and original attitudes will remain intact. If majority/minority group membership has social meaning, either because majority group membership is desirable (e.g., it forms part of the person’s in-group) or minority membership is undesirable (e.g., it has deviant status), then majority status can act as a heuristic cue. In this context, the majority default option typically applies. As outlined above, in some situations, a minority might also act as a heuristic cue. When heuristic processing occurs, then there is public compliance to the source’s position without affecting preexisting attitudes.

When the elaboration context is at an intermediate level, we make specific predictions concerning the impact of majority and minority influence. When people have the motivation and ability to elaborate the message, there is some choice as to which strategy to follow. The transition from low to intermediate elaboration contexts occurs when a threshold is crossed that allows (or encourages) the message recipient to engage in sufficient elaborative processing of the message to potentially allow for attitude change to occur. In this situation of moderate levels of ability and/or motivation, Petty et al. (1999) state that “... when thinking is not constrained to be high or low by other variables ... source variables can determine the extent of thinking” (p. 20).

What determines this choice, and the type of processing strategy, is the status of the source. If the elaboration context is not too high, then the “majority default option” applies. Even though people could systematically process the message, they typically will not do so, and take the option to comply with the majority position (to attain desirable majority group status, and so on) without considering the majority’s arguments in detail. Therefore, people’s underlying attitudes remain unchanged. However, when the source is a minority and it meets the behavioral style threshold (Moscovici, 1976), then this can lead to elaborative processing of the minority’s arguments to see if it “... may contain some truth ... as a result of trying to see or understand what the minority saw or understood, the majority begins to see and understand as the minority would” (Moscovici and Personnaz, 1980, pp. 271–272). These predictions follow those outlined by conversion theory and are also supported by research in the persuasion literature showing that, under intermediate processing demands, people process messages from a stigmatized source more systematically than from a nonstigmatized source (see Fleming et al., 2005; Petty et al., 1999; White and Harkins, 1994).

When the elaboration context is high (e.g., the topic is high in personal relevance, secondary tasks focus attention on the arguments), the motivation and/or ability to process the message is correspondingly high, leading
to elaborative processing for both the majority and the minority. Because people are highly motivated and able to process the message, the majority default option is overridden and attention focuses on the content of the message. Thus, both the majority and minority source can lead to elaborative processing and attitude change is primarily determined by the amount of message-congruent thinking. In addition, it is possible that both elaborative and heuristic processing might occur, especially when the results of each type of processing complement each other, for example, the majority uses convincing arguments (the “co-occurrence hypothesis,” Bohner et al., 1995; see Erb and Bohner, 2007) or majority status acts as a message argument (Petty and Wegener, 1998). In this situation, there may be greater attitude change to a majority than a minority source.

To summarize, in a low elaboration context attention focuses on source status and attitudes can be guided by heuristic cues resulting in public compliance without affecting preexisting attitudes. In an intermediate elaboration context, source status determines the type of processing. The majority default option applies and there is compliance to the majority without message elaboration. For a minority that adopts a positive behavioral style, elaborative processing can occur leading to attitude change. In a high elaboration context, attention focuses primarily on the content of the source’s arguments and elaborative processing can occur for both a majority and minority. Attitude change is related to the amount and direction of message-relevant thinking. In some situations, elaborative and heuristic processing can co-occur leading to majorities having more influence than minorities. Overall, majorities lead to message processing in a high elaboration context (e.g., high outcome relevance) whereas minorities lead to message processing in intermediate/high elaboration contexts when there is sufficient opportunity for their positive behavioral style to impact upon the majority.

4.3. Nature of attitudes following majority and minority influence

The third part of our theoretical framework considers the nature of attitudes that are formed following majority and minority influence. According to the ELM, attitudes changed via systematic processing result from a detailed cognitive elaboration of the source’s message and these are referred to as “strong” (Krosnick et al., 1993; Petty, 1995). According to Krosnick and Petty (1995), there are four key characteristics of strong attitudes: they are resistant to counter-attitudinal appeal (Haugtvedt and Petty, 1992; Petty et al., 1995), they persist over time (Visser and Krosnick, 1998), they are more likely to guide behavior (Holland et al., 2002; Leippe and Elkin, 1987), and, finally, they guide information-processing (Houston and Fazio, 1989; Lord et al., 1979). By contrast, attitudes formed via
nonsystematic processing tend to be relatively “weak,” in that they have not been based upon message elaboration, and this means that they are unable to resist counter-persuasion, do not persist over time, do not predict behavior, and they do not guide information-processing.

Petty et al. (1995) describe three reasons why message elaboration should result in these consequences. First, message elaboration can increase the structural consistency for an attitude because the process of elaboration might resolve preexisting inconsistencies amongst attitude components. Second, message elaboration can increase the association between various aspects of people’s attitudes and therefore increase their accessibility in memory (which is known to increase the attitude-behavior link, Fazio, 1995). Third, message elaboration may increase people’s belief that they have expanded considerable cognitive effort leading to increased confidence in their attitudes.

Applying this reasoning to our framework leads to the prediction that attitudes changed via elaborative processing (whether from a majority or minority source) should lead to attitudes that resist counter-persuasion, persist over time and guide behaviors compared to attitudes changed via nonelaborative or heuristic processing.

5. Research Program

It is a capital mistake to theorize before one has data.

(Sir Arthur Conan Doyle, Scandal in Bohemia)

We now review a series of key experiments from our own research program that have tested various aspects of the theoretical framework presented earlier. We have organized the experiments around the three aspects of our framework concerning (a) source status and types of message processing, (b) the contexts under which these processes occur, and (c) the nature and consequences of attitudes formed following majority and minority influence. Before we present these experiments, we briefly review the methodology and procedure employed as these were common to all the experiments (precise details of experimental procedure and results are, of course, given in the primary publications cited throughout).

5.1. General methodology and procedure

While there were some variations between the experiments described in this chapter, they followed a similar methodology and procedure which are described below. For further information, the reader is directed towards the individual papers.
5.1.1. Methodology

5.1.1.1. Stimulus materials We employed a wide range of attitudinal issues in our studies, all pretested to be topical for participants. These included the legalization of voluntary euthanasia (the right of someone with a terminal illness to end their life), the use of animal experimentation for scientific research, the introduction of oral exams in universities, the introduction of the Euro currency in the UK, and the introduction of voluntary student unionism in Australia.

5.1.1.2. Message development We undertook extensive pretesting to generate attitude materials (following standard procedures described by Eagly and Chaiken, 1993, p. 311; and Petty and Cacioppo, 1986, p. 133). The aim was to establish two messages that contained either strong or weak arguments concerning the social issue and that only differed in terms of their level of persuasiveness. Message development involved the following main stages.

The first stage involved argument generation. We collected arguments concerning each topic from a number of sources such as newspaper articles, campaign materials, and student discussion groups. We drew up a list of about 24 arguments including roughly equal numbers of what seemed, intuitively, to be weak versus strong arguments. We ensured that each argument made one point with reference to the topic and that all the arguments were similar in word length (about two sentences each). The second stage involved argument assessment and this involved judges (separately and independently), rating each argument on two dimensions: how “persuasive” and “believable” they were. The third stage concerned argument selection. This involved the selection of an equal number of arguments (typically six) that were rated as being the most (strong) or least (weak) persuasive. We were careful to ensure that we did not include arguments that were low on believability (we checked that the mean believability rating for the strong and weak arguments was similar). We also ensured that the word count for all the strong and weak messages was similar. The fourth stage concerned message piloting. We constructed separate messages containing either the strong or weak arguments and then asked a group of participants (from the same target population as the main experiments) to read the message and then: indicate their attitude towards the topic, list the thoughts they had had when reading the arguments, and then rate the arguments on several dimensions (such as, believability; comprehensibility; complexity; familiarity). The messages were deemed suitable if the strong versus weak message led to more agreement with the argument position, a greater proportion of message-congruent thoughts (strong messages should elicit more favorable than unfavorable thoughts, and the reverse for weak messages; Petty and Cacioppo, 1986), and the two messages were rated as being similar in terms of believability, comprehension, complexity, and familiarity.

Example arguments, developed for the strong and weak versions of the pro- and anti-voluntary euthanasia messages, are shown in Table 5.4, and
| Pro-message | We live in a society where freedom of choice is highly valued. This freedom of choice should be extended to include the individual's choice to have their life ended under certain circumstances.  
Voluntary euthanasia is practiced in secret by some doctors anyway. Legalization would provide standardized guidelines and, therefore the system would be less open to abuse.  
Doctors should not be able to decide what is right and wrong for someone else. Voluntary euthanasia gives ultimate control of their life back to the patient. |
| Anti-message | Euthanasia is an extremely complex issue, covering a wide range of situations. Legalizing any form of euthanasia could eventually lead to decisions being made to terminate someone's life in situations that are morally and ethically unacceptable.  
Euthanasia leaves the way open for bribery and financial gain to influence doctors' decision-making. This could lead to an abuse of the system, for example, relatives could see it as a short-cut to their inheritance.  
Practicing doctors must know of several cases in which death seemed inevitable, yet the patient made a good recovery. Doctors are not always right in their diagnosis; people get better against the odds. Euthanasia does not allow for this possibility. | Euthanasia is an extremely complex issue, covering a wide range of situations. Legalizing any form of euthanasia could eventually lead to decisions being made to terminate someone's life in situations that are morally and ethically unacceptable.  
Euthanasia leaves the way open for bribery and financial gain to influence doctors' decision-making. This could lead to an abuse of the system, for example, relatives could see it as a short-cut to their inheritance.  
Practicing doctors must know of several cases in which death seemed inevitable, yet the patient made a good recovery. Doctors are not always right in their diagnosis; people get better against the odds. Euthanasia does not allow for this possibility.  
We are put on this earth to suffer and endure life to the end. Therefore, no one should abuse this natural law. The act of voluntary euthanasia is therefore wrong and against the natural cycle of life.  
Society should ensure that people are treated with dignity. This means that for the good of society as a whole, life should be preserved regardless of what the individual who is terminally ill requests.  
One should not consider ending one's life, even if there is no hope of recovery. Everyone needs to live their life to the end, no matter what is their quality of life. Therefore opposition to euthanasia ensures respect for life. |
| Weak arguments | There is nothing new in euthanasia. In the days when most people died at home, a suffering patient's death was often hastened by the relatives or G.P.  
Medical technology is used to save, transform, and prolong lives. Why then, should it not be used to end lives, if that is what the individual wants?  
Voluntary euthanasia is a humane and economic alternative to the suffering and problems associated with old age. People could choose to die when they wanted to and not have to accept the decline into old age.  
We are put on this earth to suffer and endure life to the end. Therefore, no one should abuse this natural law. The act of voluntary euthanasia is therefore wrong and against the natural cycle of life.  
Society should ensure that people are treated with dignity. This means that for the good of society as a whole, life should be preserved regardless of what the individual who is terminally ill requests.  
One should not consider ending one's life, even if there is no hope of recovery. Everyone needs to live their life to the end, no matter what is their quality of life. Therefore opposition to euthanasia ensures respect for life. |
pilot data for these arguments are shown in Table 5.5 (note, positive and negative thoughts refer to message-congruent and message-incongruent thoughts respectively). We asked a sample of participants to read one of the messages (strong vs weak × pro- vs anti-voluntary euthanasia) and then complete a thought-listing task, a 9-point scale indicating their attitude to voluntary euthanasia and ratings of the message on the dimensions noted above. The thought-listing data showed a significant interaction between argument quality and message direction. Strong arguments yielded more positive than negative thoughts (66% vs 34%, respectively) whereas weak arguments resulted in more negative than positive thoughts (67% vs 33%, respectively). Importantly, the three-way interaction was nonsignificant, showing the above pattern was found for both pro- and anti-voluntary euthanasia messages. For the attitude scores, there was a reliable argument quality by message direction interaction. The pattern of means perfectly corresponds to our expectations; for the pro-voluntary euthanasia arguments, the strong version led to a more favorable attitude ($M = 7.69$) than did the weak version ($M = 5.73$), whereas for the anti-voluntary euthanasia message, the strong version led to a less favorable attitude ($M = 4.69$) than did the weak version ($M = 7.21$). Clearly, the strong and weak versions of the messages were leading to differential cognitive elaborations which are consistent with the resulting attitude change. There were no differences in ratings of believability, comprehensibility, complexity, and familiarity.

**Table 5.5** Pilot study mean results concerning development of strong and weak messages that are pro- and anti-voluntary euthanasia

<table>
<thead>
<tr>
<th>Argument direction</th>
<th>Pro-voluntary euthanasia</th>
<th>Anti-voluntary euthanasia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strong</td>
<td>Weak</td>
</tr>
<tr>
<td>Positive thoughts number (%)</td>
<td>2.23 (74)</td>
<td>1.27 (37)</td>
</tr>
<tr>
<td>Negative thoughts number (%)</td>
<td>0.77 (26)</td>
<td>2.20 (63)</td>
</tr>
<tr>
<td>Attitude</td>
<td>7.69</td>
<td>5.73</td>
</tr>
<tr>
<td>Message ratings:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Believability</td>
<td>5.69</td>
<td>4.73</td>
</tr>
<tr>
<td>Comprehensiveness</td>
<td>5.92</td>
<td>5.27</td>
</tr>
<tr>
<td>Complexity</td>
<td>3.46</td>
<td>3.07</td>
</tr>
<tr>
<td>Familiarity</td>
<td>5.69</td>
<td>5.20</td>
</tr>
</tbody>
</table>
5.1.2. Procedure
Most experiments consisted of three main stages, with a separate booklet for each: pretest, message exposure, and posttest. In the pretest, participants were asked to indicate their attitude to a range of social issues, one of which concerned the topic of influence. As well as providing a pretest score, this measure also served as a screening item to ensure that only participants were selected who met sample selection criteria. For example, in some experiments, participants were only included if the source message was counter-attitudinal with respect to their initial attitude.

The second booklet reported the results of a recent survey of students at their college concerning the topic of influence. This (fictitious) survey formed the basis for the source status manipulation, and it should be noted that we made explicit that the survey was conducted amongst their peers in order to locate the source status variable within the in-group population. Participants were informed about the proportion of the population that supported the message (which was stated as being “in favor” of or “against” the topic). We manipulated source status in one of two ways: (a) via numerical support such as, 82% (majority) or 18% (minority) support; or (b) via results of a panel discussion showing 9 out of 11 (majority) or 2 out of 11 (minority) support. Source status information was printed in bold in order to make this salient. Participants were then informed that the main arguments given by this section of the population were reported on the following page. The message contained either five or six separate arguments and these were either listed separately or contained within an article within a student magazine. Participants read either the strong or weak version of the message.

The third booklet contained the dependent measures which typically included (1) manipulation checks on the efficacy of the independent variables (e.g., percent of students agreeing with the message); (2) a measure of attitude towards the topic using either a single item 9-point item or a reliable multi-item scale (consisting of four or six 9-point semantic differential scales); (3) a thought-listing task in which participants reported their thoughts to the message by writing their thoughts about the message (one thought into each of several “idea” boxes, later rated by the participant as in favor, against or neutral towards the topic). Some experiments had additional measures and stages specific to their design (e.g., age, gender, religion, indirect attitudes, behavioral intentions, an additional booklet containing a counter-message, and so on). At the end of the experiment, the participants were thanked and debriefed as to the aims of the research.

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3 Gross and Miller (1997) have argued that the “Golden Section” (61.8% majority; 32.8% minority) may reflect the point at which, subjectively, majority size is recognized. Our standard manipulation (82:18) clearly exceeds this criterion, although some of the studies reported below where we varied the size of majority and minority do not.
5.1.3. Statistical analysis
Our main analyses focused on the effects of the two independent variables (i.e., source status and argument quality) on the dependent measures (e.g., posttest attitude or attitude change scores) and the thought-listing responses. In line with previous research, we also computed a ratio of message-congruent thoughts (number of thoughts in favor of the position advocated by the source/total number of thoughts in favor and against the source’s position). This ratio indicates the proportion of message-congruent thoughts in the direction of the source’s position. For each dependent variable, we conducted factorial analyses of variance (ANOVA) and, where appropriate, tested hypotheses using post hoc tests or planned comparisons. To explore the potential mediating role of thought elaborations in determining attitudes, we computed regression procedures outlined by Baron and Kenny (1986).

It should be noted that in many experiments, preliminary analyses examined the effects of gender and age on the dependent variables. No reliable findings were found for either of these factors and so they are not reported in subsequent analyses.

5.2. Experimental studies
In this section, we review our experimental studies in relation to the three aspects of our theoretical model we described earlier (1) source status and types of message processing, (2) conditions affecting when message processing occurs, and (3) the nature of attitudes following majority and minority influence.

5.2.1. Source status and types of message processing
In these studies, we examined the processes underlying majority and minority influence. In one experiment, we exposed participants to a message in favor of the use of animals in scientific research (Martin and Hewstone, 2003b, Experiment 1). They were told that either 82% (majority) or 18% (minority) supported the pro-animal research position. They then read a set of either strong or weak arguments (a third independent variable concerned the initial attitude position, pro- vs anti-animal experimentation, but this did not affect influence). The results for the posttest attitude score showed a reliable interaction between source status and argument quality (see Fig. 5.1). Additional analyses showed a reliable argument quality effect for the minority (strong > weak) but not for the majority source.

The data from the thought-listing task yielded a reliable difference in the minority condition, showing that strong arguments led to a greater proportion of message-congruent thinking than did weak arguments. Furthermore, the thoughts ratio mediated the relationship between argument quality and attitude scores. The attitude and thought-listing data support the view that the minority source led to elaborative processing and this affected attitudes. By contrast, the lack of an argument quality effect for the
majority on both attitude and thoughts ratio suggests that participants had engaged in nonelaborative processing. The results of the attitude and thought-listing data support conversion theory’s prediction that it is the minority source that leads to detailed message processing.

This first experiment showed that people processed the minority’s arguments, which affected their attitudes, but it does not indicate why this might occur. We have argued that for minorities to have influence, they need to have a positive behavioral style and be seen as “distinctive” from the majority. One aspect of distinctiveness concerns the numerical size of the minority. It could be assumed that being a numerically small group might make a minority more distinctive in the eyes of the majority, and that this would lead to, possibly even be necessary for, message elaboration.

We tested this idea in an experiment that manipulated the consensus level of the majority and minority as being either a large difference (82 vs 18%), as operationalized in the previous experiment, or relatively small (52 vs 48%) (Martin et al., 2002, Experiment 3). If minority distinctiveness is important in attracting attention to the minority’s message, we reasoned that a numerically small (18%) minority would be more likely to lead to systematic processing than would a “large” (48%) minority.

The message used in this study concerned the legalization of voluntary euthanasia and employed either a strong or weak message that was anti-voluntary euthanasia. The predicted three-way interaction on posttest attitudes between consensus differences, source status, and message quality was significant (see Fig. 5.2: note, scores are reverse coded to show agreement with source). Confirming our predictions, there was no difference between the strong and weak messages for the majority, irrespective of its consensus level (82% or 52%). However, consensus difference did have an effect for minority influence: there was a reliable argument quality effect only for the numerically

![Figure 5.1](image-url)
small (18%) minority. Furthermore, the proportion of message-congruent thinking mediated the relationship between this interaction and attitudes. This shows that participants had processed the message when attributed to an 18% minority. An additional finding of interest concerns when the consensus level between the majority and minority was small (52 vs 48%). Here, we found no effect of argument quality in either source condition, but a reliable source effect showing more influence from the 52% majority than the 48% minority (for an alternative effect of the numerical size of the majority and minority on attitude change, see Erb et al., 2006).

Another further experiment dealing with the size of the source confirmed that being perceived as “small” was important in leading people to elaborate the minority’s arguments (Gardikiotis et al., 2005, Experiment 2). In this experiment, participants read either strong or weak arguments against voluntary euthanasia. Two independent variables were manipulated in relation to the supporter of the arguments: source status (majority vs minority) and consensus adjective (large vs small); thus the majority or minority was referred to as being either “large” or “small.” There was a reliable argument quality effect only for the “small minority.”

In summary, these first three experiments all point to the elaboration of messages from the minority, but not the majority, and the minority source received elaboration of its message only when it was seen as distinctive (whether by its size in percentage terms, or by being labeled “small” in size).

5.2.2. Conditions affecting when message processing occurs

We turn now to some of the potential contingency variables that might determine when people will engage in elaborative processing of the majority or minority’s arguments. We deal, in turn, with source-position

Figure 5.2  Mean attitude scores as a function of numerical size, source status, and argument quality (Martin et al., 2002, Experiment 3).
congruency, negative outcome bias, and studies that manipulated ability or motivation to elaborate the message.

5.2.2.1. Source-position congruity In this section, we explore the source-position congruity predictions proposed by Baker and Petty (1994). To recap, they propose that people will engage in systematic processing when their consensus expectations are broken (i.e., when the source-position is “imbalanced”: counter-attitudinal majority or pro-attitudinal minority) and will not engage in systematic processing when their consensus expectations are confirmed (i.e., when the situation is “balanced”; pro-attitudinal majority or counter-attitudinal minority). In our review of the Baker and Petty experiments, we noted that their basis for determining source-position congruity had not been satisfactorily established. Therefore, it was the aim of this experiment to employ a methodology to ensure that balanced and imbalanced conditions had been created (Martin and Hewstone, 2003b, Experiment 1).

We have described this experiment in the last section; here, we present additional information concerning how we ensured that balanced and imbalanced conditions had been met. We did this by asking participants, prior to exposure to the message, to indicate the percentage of students they believed were “in favor,” “against” or “don’t know” regarding the issue of animal research. Analyses of these scores indicated, as expected, that participants tended to believe that more students shared their opinion than opposed it, and this was true for those initially against and in favor of animal research. To ensure that participants met our selection criteria, they were only included in the experiment if their pretest attitude score placed them unambiguously in a counter- or pro-attitudinal condition with respect to the message, and their percentage estimates showed they believed more students agreed with their attitude than opposed it.

As indicated above, the experiment found a reliable argument quality effect only for the minority condition, and this occurred in both the balanced and imbalanced conditions. Contrary to Baker and Petty (1994), a study that used a topic with a negative outcome, in this experiment which carefully established balanced and imbalanced conditions, and did not employ a topic that might have induced a negative personal outcome bias, we found message processing only in the minority condition (see also Gardikiotis, 2005).

5.2.2.2. Negative outcome bias In our review of the research, we proposed that the message topic might moderate when a majority or minority induces message processing. In particular, we noted that experiments showing only a majority leading to systematic processing had employed a message that advocated a counter-attitudinal position and was against the participants’ self-interest—a position we have termed as “negative personal
outcome.” When a majority endorses such a position, it is likely that this leads to curiosity (“why are the majority arguing against my, and their, interest?”). Because the majority position often prevails, due to the weight of numerical support, this provides a dilemma for the individual—“most people are arguing for something that is likely to occur, and that is against my self-interest.” This situation might lead people to process the majority’s arguments to understand the proposal and its implications to them personally. However, when the minority argues for a negative personal outcome, it may be ignored, either because weakly supported positions are unlikely to be adopted, or to protect one’s self-interest (“a few people are arguing for something that is unlikely to be adopted and therefore is not threatening”). By contrast, when the topic does not lead to a negative personal outcome, we predict a similar pattern of results to our earlier experiments; namely, message processing only for the minority.

Thus far, however, topics varying in negative outcome bias have been used in different experiments. In our next experiment, we therefore manipulated whether the topic induced a negative personal outcome, or not (Martin and Hewstone, 2003b, Experiment 2). We did this by using different topics which varied in the extent to which they argued in favor of a negative personal outcome (low vs high). Message topics were selected from a pilot study that asked participants to rate a number of social issues with respect to (a) their agreement with the issue, (b) whether the issue affected their self-interest, and (c) the potential outcome of the proposed change (negative vs positive). On the basis of these ratings, two topics were chosen which differed reliably on these dimensions. The first topic, “the legalization of voluntary euthanasia,” was rated as one on which the respondents were in favor of the issue, it was moderate in self-interest, and the proposed change had a positive outcome. By contrast, the second topic, concerning “the introduction of a single currency in Europe (the ‘Euro”),” was rated by our British participants as one on which they were against the issue, it was high in self-interest, and the proposed change was perceived as leading to a negative outcome. We then developed strong and weak counter-attitudinal arguments for the anti-voluntary euthanasia and pro-Euro issues which represented low and high negative personal outcomes, respectively.

As expected, this experiment yielded a reliable three-way interaction between message topic, source status, and argument quality (see Fig. 5.3). When the arguments did not induce a negative personal outcome (voluntary euthanasia), there was an argument quality effect only for the minority condition which replicates our earlier experiments. However, when the topic was associated with a negative personal outcome (Euro), consistent with our predictions, the pattern of results was reversed (replicating Baker and Petty, 1994, Experiment 1). In this case, there was a reliable argument quality effect for the majority source but not for the minority source. Furthermore, in the conditions showing an argument quality effect, the relationship between
argument quality and attitudes was mediated by the proportion of message-congruent thinking—suggesting that participants had systematically processed the arguments. Therefore, a topic that induces a negative personal outcome—that is, a position that argues against the self-interest of the source and recipients of influence and proposes a negative outcome—moderates message processing of both the majority and minority source.

A potential problem with the last experiment is that it manipulated negative outcome bias by using different topics (and arguments) and it is possible that topic differences, rather than outcome bias differences, determined the results. To overcome this potential problem, we conducted an experiment that employed the same topic for all participants (pro-animal experimentation) and we manipulated personal outcome bias via feedback about the source’s belief concerning their self-interest in the topic (Martin et al., under review, Experiment 2). After the source status manipulation, participants were informed either that “These students thought their position was in favor of their own and other peoples’ self-interest” (positive personal outcome) or that “These students thought their position was against their own and other peoples’ self-interest” (negative personal outcome). Manipulation checks subsequently established that this manipulation had successfully led to different beliefs about the source’s self-interest in the topic.

Attitudes towards animal experimentation were taken before and after exposure to the arguments. Mean attitude change scores showed a reliable three-way interaction between source status, argument quality, and
The pattern of results replicated those found for the last experiment. When the source argued for a positive personal outcome, there was a reliable argument quality effect only for the minority but not for the majority—a consistent finding in our experiments. However, when the source argued for a negative personal outcome, the pattern was reversed; there was a reliable argument quality effect for the majority but not for the minority. The data for the proportion of message-congruent thinking mirrored the pattern found for attitude change and further analyses showed that message-congruent thinking mediated the relationship between the independent variables and attitude change.

Taken together, the results of these two experiments (and also Martin et al., under review, Experiment 1, that examined self-reported self-interest) provide strong evidence for the role of outcome bias, and help us to provide theoretical integration of a previously disparate set of results from different research labs. On the basis of the attitude and thought-listing data, in an intermediate processing situation when there is no negative outcome bias, people engage in elaborative processing of a minority message. However, when the topic induces a negative outcome bias, then there is only elaborative processing for the majority source.

**5.2.2.3. Manipulating ability/motivation for message elaboration**

Thus far, our experiments have demonstrated that in intermediate processing situations, where there are no situational factors that either increase or
decrease elaboration of the message, message recipients will engage in elaborative processing of the minority’s arguments more than the majority’s arguments, provided that the personal outcome is not negative.

However, our theoretical framework makes specific predictions concerning how people will process a majority and minority message at different levels of elaboration (low, intermediate, and high). To briefly recap our predictions: under low elaboration, attitudes will not be guided by argument quality but by heuristic cues (such as, “majority more likely to be correct than minority”); under intermediate elaboration (a situation akin to many conditions described above), attitudes will be guided by source status (elaborative processing for a minority); and under high elaboration, attitudes will be guided by argument quality for both majority and minority and, in specific situations, by both elaborative and nonelaborative processing. We now review two experiments that manipulated the elaboration context and investigated the effects of source status on attitudes (see also Martin and Martin, 2006, who increased message elaboration via ingestion of caffeine).

In the first experiment, we manipulated elaboration context using a method inspired by Craik and Lockhart’s (1972) levels-of-processing approach to memory. In a highly influential paper, Craik and Lockhart suggested that incoming stimuli can be processed at different levels and that this has consequences for their retention in memory. Their main postulate was that the more deeply information is processed, the more it will be remembered (the “depth effect”). They proposed that there is a continuum from phonological (based on sounds) to semantic (based on meaning of words) processing, which corresponds to a shallow/deep level of processing and that memory is a by-product of the depth of processing. Evidence for the depth effect comes from studies that have used the incidental learning paradigm. In these studies, participants are presented with a list of words and are asked to make various judgments about them (a so-called orientating task). Following this, and unknown to the participant at the time of presenting the test stimuli, they are given a memory test. Recall is taken as an index of level of processing. By using a variety of orientating tasks, it is possible to manipulate the level of processing participants are required to undertake. For example, asking participants to indicate whether a stimulus word is in capitals would require only shallow processing; thinking of a word that rhymes with the stimulus word would need medium level of processing; while evaluating whether the stimulus word fits into a sentence would need deeper processing. Many studies have since found that the greater the depth of processing, the greater the recall (e.g., Craik and Tulving, 1975).

In this experiment, we presented participants with a set of strong or weak anti-voluntary euthanasia arguments (Martin et al., 2007a, Experiment 2). Portions of the arguments were repeated alongside the original message
(the selected text). The level of message elaboration was manipulated by asking participants to conduct one of three orientating tasks on the selected text (manipulation checks established that these tasks had been performed correctly). In a lexical-processing condition (low elaboration condition), participants were asked to check whether the selected text was written in the same font type and size as the original message. This task should result in only shallow message processing and therefore there should be no effect of argument quality. However, we predicted that the majority source, operating via a consensus heuristic, would have greater impact on attitudes than the minority source. In a “surface” semantic-processing condition (intermediate elaboration condition), participants were asked to check the spelling of words in the selected text. This task requires semantic processing of single words and we would expect intermediate processing to occur; we predicted message processing only for the minority source, due to its distinctiveness leading to message validation (cf., Moscovici, 1980). In a “deep” semantic-processing condition (high elaboration condition), participants were asked to rewrite the selected texts in different words but to convey the same meaning. This task requires semantic processing of sentences and we predicted that strong arguments (regardless of majority/minority support) would have greater impact on the reported attitudes than weak arguments.

We tested our hypotheses, within each processing condition, with a series of planned contrasts. These confirmed our hypotheses (see Fig. 5.5).

![Figure 5.5](image-url)

**Figure 5.5** Mean attitude change scores as a function of message processing task, source status, and argument quality (Martin et al., 2007a, Experiment 2).
In the low elaboration condition, the only reliable effect was for source status, with the majority having more influence than the minority. The lack of an argument quality effect suggests the source status main effect was due to nonelaborative processing. In the intermediate elaboration condition, there was a reliable interaction between source status and argument quality, showing a difference between strong and weak messages for the minority but not majority source. Finally, in the high elaboration condition, there was an argument quality effect for both majority and minority sources, showing participants had engaged in elaborative processing for both sources.

The pattern of results for message-congruent thoughts complemented the attitude data. In the low elaboration condition, there were no reliable effects, as one would expect; here we predicted attitudes would be guided by heuristic cues and not by elaboration of the source’s arguments. In the intermediate elaboration condition, there was a reliable interaction between source status and argument quality that mirrored the pattern found for attitudes. Finally, in the high elaboration condition, the only reliable finding was for argument quality. Further evidence that the argument quality effect was due to elaborative processing comes from the finding that the proportion of message-congruent thinking in both the intermediate and high elaboration conditions mediated attitude scores.

An additional experiment in the same paper also manipulated levels of message elaboration but this time using a motivational, rather than cognitive, manipulation. Specifically, we varied the outcome relevance of the topic (Martin et al., 2007a, Experiment 1). In this study, participants read either a strong or weak message that advocated the introduction of oral exams as part of their college examinations. They were told either that oral exams would be introduced into another college, and not their own, and so they would not be affected by them (low relevance), or no information was given about oral exams being introduced into a college (intermediate relevance), or they were told that oral exams would be introduced into their college during their time at college (high relevance). The manipulation of personal relevance is conceptually analogous to the three elaboration levels obtained by using orientating tasks in the previous experiment, and the pattern of results for attitudes was very similar across the two studies. The key effects were a source main effect (majority > minority) under low relevance, an argument quality effect only for the minority under intermediate relevance, and an argument quality effect for both the majority and minority under high relevance (in this latter condition there was also a source main effect; majority > minority).

The results across these experiments were consistent and supported our predictions (see also Petty and Cacioppo, 1984). When the elaboration context was low, there was no effect of argument quality but a reliable source status effect. In both experiments, there was heuristic acceptance of the majority position without detailed processing of its arguments.
When the elaboration context was intermediate, there was an interaction between source status and message quality. As we predicted, only the minority source triggered elaborative processing. This finding supports Moscovici’s (1980) conversion theory and shows one of the boundary conditions under which it might apply. Finally, when the elaboration context was high, there was a reliable effect of argument quality, showing elaborative processing for both a majority and minority source.

As we noted above, when high elaboration was manipulated by having high personal relevance, there was, in addition to the argument quality effect, a source main effect (but this was not found when high elaboration was achieved via an orientating task). Both Crano and Chen (1998) and Kerr (2002) found a similar pattern in experiments that also manipulated message elaboration by means of personal relevance. It is possible that when message elaboration is manipulated via motivational means, a number of processes can operate together. Hence, encouraging people to read arguments that are personally relevant both triggers an elaborative appraisal of the arguments and leads to greater focus on the source of the message, resulting in heuristic acceptance (this is consistent with the co-occurrence hypothesis in the HSM, see Bohner et al., 1995).

5.2.3. Nature of attitudes following majority and minority influence
In this final empirical section, we review some of our studies that have examined the consequences of engaging in elaborative processing following majority and minority influence. Specifically, these studies tested the prediction that minority-supported messages resulted in “strong” attitudes (Krosnick et al., 1993; Petty, 1995), which resist counter-attitudinal appeal, persist over time, and guide behavior (we have not conducted research on whether these minority-led attitudes also guide information-processing). It should be recalled that we predict that in most persuasion situations (what we refer to as “intermediate” processing contexts), there will be heuristic acceptance of a majority position (without detailed consideration of the majority’s arguments), whereas a minority should stimulate elaborative processing of the content of its arguments. If this is the case, then attitudes formed following minority influence should be relatively “strong,” compared to those formed following majority influence, and therefore message recipients should be better able to resist counter-persuasion, should persist over time, and should predict behavior. We now review some of our experiments on each of these issues.

5.2.3.1. Resist counter-persuasion
To test further our model, we wanted to examine the strength of attitudes that had first been formed by a minority or majority, in order to see if these attitudes would be able to resist a counter-persuasive communication. To achieve this aim, we exposed participants, in turn, to two messages that argued different positions
on the same topic, with attitude scores taken after each message (for use of this paradigm, see, e.g., Haugtvedt and Petty, 1992; Haugtvedt and Wegener, 1994; Wu and Shaffer, 1987). In terms of cognitive models of persuasion, elaborative processing of the first (initial) message potentially provides individuals with arguments to resist the “attack” from the second (counter) message (in some respects the first message “inoculates” participants against attack from the second message, McGuire, 1964). However, if attitudes to the initial message are formed via nonelaborative processing, they should be relatively weak and susceptible to the influence of the second countermessage. To summarize our prediction, if minority influence leads to conversion, as predicted by Moscovici (1980) and by our theoretical framework, then, attitudes formed following exposure to a minority should be more resistant to counter-persuasion than attitudes formed following majority influence.

We tested this hypothesis (Martin et al., 2003, Experiment 2) in an experiment that measured participants’ attitudes towards voluntary euthanasia at three time points: at the onset of the experiment (pretest), after exposure to a counter-attitudinal message (initial message, posttest I), and finally after exposure to a pro-attitudinal message (countermessage, posttest II). Some procedural issues need to be mentioned. First, we only indicated the status of the source (majority or minority) to the initial message. Second, we ensured that there was a delay between exposure to the two messages (≈5 min) to ensure that participants had sufficient time to engage in message elaboration, if they chose to, before exposure to the countermessage. Finally, because we wished to encourage elaborative processing of the initial message (and, potentially, resistance to the countermessage), we used only the strong version of each message.

The results for the attitude data showed the expected two-way interaction between source status and measurement times (see Fig. 5.6). Note that because of the difference in the directions of the messages, influence to the source is shown by high scores on the initial message and by low scores on the countermessage. There was a reliable change across the measurement times for both the majority and minority conditions—but the pattern varied. When the source was a majority, participants were influenced by the initial message as shown by a reliable increase between pretest and initial message/posttest I; however, these attitudes were vulnerable to the second countermessage as shown by the reliable reduction between posttest I and posttest II. In fact, for the majority source, there was no difference between pretest and posttest II attitude scores, showing that attitudes following the countermessage returned to their pretest levels. This pattern suggests that participants had heuristically accepted the majority’s position to the initial message, without detailed processing of its arguments, and therefore, the attitudes that resulted were weak and yielded to the countermessage. In the minority condition, participants were also influenced by the initial message...
but, unlike in the majority condition, these attitudes did not change as a result of exposure to the countermessage. This pattern suggests that participants had processed the minority’s arguments in the initial message and, as a result of doing this, these attitudes were relatively strong and they were able to resist the countermessage.

The data from the thought-listing task (completed after the initial message) support the above conclusion. Those in the minority condition engaged in more message-congruent thinking than did those in the majority condition, suggesting that minorities encouraged greater elaborative processing. Furthermore, the proportion of message-congruent thinking mediated the change in attitudes between the initial and countermessage.

Further experiments reported by Martin et al. (2003) addressed some additional methodological and theoretical issues associated with this paradigm. For example, in one experiment, the order of the messages was reversed with the initial message being pro-attitudinal and the countermessage being counter-attitudinal (Martin et al., 2003, Experiment 1). Thus, the first message was consistent with preexisting attitudes, whereas the second message was inconsistent. Attitudes did move towards the countermessage position in both source conditions but the reduction was smaller, indicating greater elaborative processing, when the source of the initial message was a minority than a majority. A potential methodological problem in this paradigm is whether the participants resisted the countermessage or, in fact, were influenced by it. We tested this competing hypothesis in an experiment that replicated the majority and minority
conditions but also added conditions in which participants were exposed to only a majority- or minority-endorsed countermessage, in order to determine how persuasive it was without prior exposure to the initial message (Martin et al., 2003, Experiment 3). The results supported the view that participants in the majority and minority conditions had, indeed, yielded in the majority condition, and resisted the countermessage in the minority condition.

The assumption in the above experiments is that the resistance to the countermessage was due to recipients processing the minority arguments. This is based on the cognitive-elaboration approach, which assumes that it is only when attitudes have been changed via systematic processing that these attitudes will be resistant to counter-persuasion. Resistance occurs through engaging in message-congruent elaborations to the initial message that render participants able to resist a countermessage. We tested this assumption further in an experiment that varied the quality of the arguments contained in the initial message (Martin et al., 2008a, Experiment 1). We reasoned that if attitude change following majority influence led to compliance (through nonsystematic processing), then the extent to which these “new” attitudes yielded to counter-persuasion should not be affected by the quality of the arguments in the initial message. However, if attitude change following minority influence was due to systematic message processing, then there should be greater attitude change following the initial message when it contained strong compared to weak arguments, and these attitudes should be better able to resist the countermessage.

This experiment was similar in procedure to that of Martin et al. (2003, Experiment 2) described earlier, except that the initial message contained either strong or weak arguments. To further examine social influence processes, this experiment also included an indirect measure of attitude change that was not mentioned in the message; the indirect attitude concerned “Genetic screening for medical disorders (e.g., cystic fibrosis, sickle cell anemia),” whereas the direct attitude concerned voluntary euthanasia. A pilot study showed that there was a moderate, but reliable, positive correlation between the direct and indirect attitudes at pretest.

The results for the direct attitude showed the expected reliable three-way interaction between source status, argument quality, and measurement time. For the majority source, the participants were influenced by the initial message but, as predicted, these attitudes yielded to the second countermessage, with attitudes returning to the pretest levels. This pattern of results was the same irrespective of the quality of the arguments in the initial message, showing that participants had heuristically accepted the majority position without considering its arguments in detail. For the minority source, participants were influenced by the initial message when it contained strong arguments and, as expected, these attitudes subsequently resisted the countermessage (supporting the findings of Martin et al., 2003).
When the minority had weak arguments, however, a different pattern emerged in that the minority-endorsed initial message did not affect attitudes and these attitudes then yielded to the countermessage. This is what we expected: if the minority encourages elaborative processing, then elaboration of weak arguments should not lead to influence (which it did not), and because no attitude change occurs, message recipients' attitudes are vulnerable to counter-persuasion. As for the previous experiments, the proportion of message-congruent thinking mediated attitude change between the initial and countermessage giving further support that resistance to counter-persuasion was due to elaborative processing of the initial message.

We can now turn to the results for the indirect attitude—an issue related to the message topic but not mentioned within it. The results revealed one important finding and that concerned the minority condition containing the strong arguments. In this condition, participants were influenced by the initial message, as shown by the increase from pre- to posttest I, but these attitudes resisted counter-persuasion as there was no difference between posttest I and posttest II. These results indicate that in the minority condition with strong arguments the elaborative processing of these arguments led to conversion to the minority position that was detected on an issue related to, but not mentioned in, the message.

So far we have found reliable evidence that majority and minority influence lead to nonelaborative and elaborative processing, respectively, and we have shown that this differentially affects the tendency of people to yield or to resist counter-persuasion. However, theoretically, we propose this relationship only when the elaboration context is at an intermediate level and we were careful to choose a pretested procedure and message we have shown to be at this level (Martin et al., 2007a). We predict that changing the elaboration context should have corresponding effects on the types of processes instigated by majority and minority sources and the nature of attitudes formed subsequently. In a further experiment (Martin et al., 2008a, Experiment 2), we examined this idea by using an orientating task to increase the elaboration context which, we hypothesized, should lead to elaborative processing of both the majority and minority source and therefore resistance to a countermessage (in the same way as the orientating task that led to high elaboration did in the experiment discussed in the last section, Martin et al., 2007a, Experiment 2). This new experiment employed the same procedures as the last experiment with two exceptions. First, we used only the strong arguments for the initial message, and second, in one condition, we told participants that they would later be required to recall the arguments in the message (this procedure should lead participants to pay closer attention to the message, and process the arguments in greater depth).

When the participants were not told that they would have to recall the arguments in the initial message, the pattern of results was the same as in
previous experiments—attitude change to the initial message yielded or resisted the countermessage when the initial message was attributed to a majority or minority, respectively (see Fig. 5.7). In the condition where participants were told that they would later recall the arguments in the initial message, which should increase elaborative processing of the arguments, attitudes following the initial message resisted the countermessage for both the majority and the minority source. Thus, this experiment shows that people will elaboratively process majority-endorsed arguments, resulting in “strong” attitudes that resist counter-persuasion, in a high elaboration context.

In summary, these studies on resistance to counter-persuasion show that attitudes formed following minority influence were relatively strong in that they were able to resist counter-persuasion. On the other hand, attitudes formed following majority influence were relatively weak and yielded to counter-persuasion, unless there was a secondary task that increased message elaboration.\(^4\)

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**Figure 5.7** Mean attitude scores as a function of measurement time, source status, and recall condition (Martin et al., 2008a, Experiment 2). *Note:* greater agreement with the source is reflected by high scores on the initial message and low scores on the countermessage.

\(^4\) Some resent research by Tormala et al. (2007) offers potentially conflicting results (see also Tormala et al., in press). They found that after initially resisting a minority message, attitudes became weaker and they were less resistant to the second message. The key difference between the Tormala et al. (2007) studies and our own studies is that in the Tormala et al. studies, participants resisted the initial message whereas in our studies, participants were persuaded by the initial message. It should be noted that theoretically we are interested in attitudes that have been formed following minority influence—a situation very different from the Tormala et al. (2007) studies. However, we recognize that whether participants resist or are persuaded by the initial message might moderate the effects of the countermessage.
### 5.2.3.2. Persist over time

According to our approach, attitudes changed by minorities should be relatively strong and should persist over time compared to attitudes changed by a majority (see also, Crano and Chen, 1998; Moscovici et al., 1981; Tafani et al., 2003). We tested this hypothesis in an experiment in which participants were exposed to strong arguments against voluntary euthanasia message (Martin and Hewstone, in preparation). We assessed attitudes on three occasions: prior to reading the message (pretest), immediately after reading the message (posttest: immediate), and 2 weeks following the experiment (posttest: delayed). On each occasion, we measured attitudes towards both voluntary euthanasia (direct attitude) and abortion (indirect attitude). Although the message concerning voluntary euthanasia did not mention the issue of abortion, pretesting had shown that people perceive a link between the two (they are both concerned with the control and sanctity of life), and there was a moderately positive correlation between the two.

There was a reliable two-way interaction between source status and measurement time for both the direct and indirect attitudes. For the direct attitude, the majority led to an immediate change in attitudes towards its position (pretest vs posttest: immediate) but attitudes returned to their pretest level 2 weeks later. In the case of the minority, there was a small immediate effect on attitudes (between pretest and posttest: immediate), but there was a larger shift to the minority position 2 weeks after message exposure. For the indirect attitude, there was no change over time for the majority source. In the case of the minority, however, there was reliable change towards the indirect attitude after exposure to the message and this change persisted over time. Taken together, these results suggest that the majority led to compliance to its position, without detailed message processing, which resulted in an immediate change to direct attitudes that did not persist over time, and had no effect on the indirect attitude. The minority source led to elaborative processing that brought about a delayed change in direct attitudes, and an immediate change to the indirect attitude that persisted over time. This different pattern of effects, across time, for the minority on direct and indirect attitude measures has also been noted in other experiments (e.g., Personnaz, 1981).

### 5.2.3.3. Predict behaviors

The final strand of our research program concerns the impact of majority and minority influence on intentions to behave in line with one’s attitudes (behavioral intentions) and on actual attitude-relevant behaviors. It should be noted that nearly all research on majority and minority influence has focused on attitudes and beliefs, and very few

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5 It is not only our participants who link issues in this way. Recently Poland blocked a European Union protest against the death penalty, arguing for parallel European condemnation of abortion and euthanasia (see The Guardian, September 12, 2007).
studies have investigated changes to people’s behaviors. Some related research has examined the role of expert versus nonexpert sources on behavioral intentions (e.g., Falomir-Pichastor et al., 2002; Joule et al., 1988), but these studies did not manipulate explicitly both majority and minority source status.

As described earlier, one consequence of elaborative processing is that it should lead to greater prediction of attitude-consistent behaviors. Indeed, persuasion research shows that when people process a message systematically, then they are more likely to engage in behaviors that are consistent with their attitudes (behavioral intention) than when they have engaged in nonsystematic processing (e.g., Cacioppo et al., 1986a; Leippe and Elkin, 1987; Petty et al., 1983). Applied to the context of majority-minority influence, we hypothesize that if attitude change following majority influence is due to nonelaborative processing, whereas attitude change following minority influence is due to elaborative processing, then attitude-consistent behavioral intentions should be expressed more strongly following a minority- than a majority-endorsed message.

We tested this hypothesis in an experiment in which participants were exposed to a counter-attitudinal message (anti-voluntary euthanasia) attributed to either a numerical majority or minority (Martin et al., 2007b, Experiment 1). After reading the message, participants indicated their intention to engage in an attitude-consistent behavior (in this case signing a “living will,” a form of advance directive that stipulates that, under specified circumstances, medical procedures should not be used to keep the signer alive; see Dworkin, 1993). If participants agree with the message (i.e., their attitude becomes less in favor of voluntary euthanasia), then they should be less likely to engage in an attitude-consistent behavior (i.e., less likely to sign a living will). In addition, we predicted that the above effects should occur only when participants had been influenced by the message. When participants were not influenced by the message, presumably because they had not elaborated on the source’s arguments, we did not expect any effect of source status on behavioral intentions. To test this idea, we split the participants into those who did, and did not, change their attitudes.

As predicted, there was a reliable two-way interaction between source status and whether attitudes had been changed or not (see Fig. 5.8). When participants did not change their attitude there was no difference between the majority and minority conditions. We suspect that this reflects the fact that no elaborative processing had occurred for these respondents. However, when participants were influenced by the source (i.e., became less in favor of voluntary euthanasia), those in the minority condition reported higher attitude-consistent behavioral intentions (i.e., less likely to sign living will) than did those in the majority condition. Although the majority resulted in the same amount of attitude change to the message as the minority, the change in attitude was due to nonelaborative processing and
thus, it was “weak” in nature and therefore did not affect attitude-consistent behavioral intentions.

A potential methodological problem with the last experiment is that it used a self-report measure of behavioral intention, and that this measure might be affected by participants’ reported attitude scores. In our next experiment, therefore, we tried to overcome this potential problem by having a measure of “actual” behavior that was taken outside the context of the experimental situation and under conditions of participant anonymity (Martin et al., 2007b, Experiment 2). We believe that this is the first study of majority and minority influence to include a direct behavioral measure.

The study concerned the introduction of voluntary student unions (VSU) into an Australian University which we knew, through piloting, that most students were in favor of. We therefore exposed participants to an anti-VSU message. At the end of the experiment, participants were given a card, addressed to the Australian Minister for Education, Science and Training, that stated “... opposition at any moves to introduce voluntary student unionism at Australian universities.” Participants were told that if they wished they could sign the card and place it in a sealed box (which was located away from the experimental room). Because the message was anti-VSU and the card voiced opposition to VSU, the act of signing and posting the card constituted an attitude-consistent behavior. It should be noted that the participants were under no obligation to sign the card and that they received their course credit before they could have posted the card. Participants believed that the experimenter would not know if they had signed the card but, by the use of invisible ink, we were able to identify which participants had posted the card.

We predicted that when the message was low/medium personal relevance, as in the last experiment, engaging in an attitude-consistent behavior would be most likely for those in the minority condition who changed their

Figure 5.8  Mean behavioral intention scores as a function of attitude change and source status (Martin et al., 2007b, Experiment 1).
attitude. This is indeed what was found (see Fig. 5.9). When participants had not changed their attitude towards VSU, there was no effect of source status on the number of people engaging in the behavior. However, when participants had changed their attitude, they were more likely to sign and return the card when exposed to a minority compared to a majority source.

5.2.3.4. Summary

For the first time, we explored the resistance, persistence, and prediction of behavior induced by majority versus minority messages. First, we showed that majority messages were vulnerable to a second, counter-persuasion message, whereas minority messages resisted the second message, due to elaborative processing of the first message that also affected an indirect measure of attitude. When, however, we experimentally manipulated high elaboration of the message, resultant attitudes were strong, resisting persuasion, in both source conditions. Further evidence of stronger attitudes in the minority condition was gleaned by use of a persistence paradigm. Whereas majority influence resulted only in immediate compliance, minority influence persisted in a 2-week follow-up. Finally, we showed a greater impact of the minority than the majority source on not only guiding behavioral intentions, but also behaving in a manner consistent with the position argued by the minority. Taken together, this is impressive cross-paradigm evidence that minority sources engender stronger resultant attitudes than do majority sources.

5.3. Summary

In this section, we have reviewed evidence from our research program in support of our model. First, we explored message processing in intermediate processing conditions. We provided evidence for elaborative
processing in the minority, but not the majority, condition, and we showed that this effect only occurred when the minority was distinctive. Next, we looked further at conditions affecting when message processing occurred. We showed elaborative processing of the minority message irrespective of the level of source-position congruency (balanced vs imbalanced), but only when the minority did not argue for a negative personal outcome; if the source argued for a negative personal outcome, there was elaborative processing of the majority, but not the minority, message. Third, we manipulated ability or motivation for message elaboration across three levels. Under low elaboration, majority influence was greater, but without elaborative message processing. Under intermediate elaboration, there was only elaborative processing of the minority message. Under high elaboration, messages from both sources were elaboratively processed. Finally, we explored the nature of attitude change induced by minority versus majority sources. The minority source was clearly associated with stronger attitudes that resisted counter-persuasion, persisted over time, and guided behavior.

6. Methodological and Theoretical Issues in Current and Future Research

Read not to contradict and confute, nor to believe and take for granted, nor to find talk and discourse, but to weigh and consider.

Francis Bacon (Of Studies)

6.1. Methodological issues in our research program

Notwithstanding its achievements in terms of better understanding when, how, and why messages associated with minority or majority sources receive detailed scrutiny, we are fully aware of some of the limitations of our research program to date, and which directions future research might move in. We deal, in turn, with our manipulation of the key source variable, our assessment of elaboration via the thought-listing procedure, and our exclusive use of a single-source paradigm. Finally, we deal with the absence of control conditions in this area of research.

6.1.1. The manipulation of source

In all our research to date, we have manipulated source status by means of consensus information, informing participants of the proportion of the relevant group that hold the view propounded in a message. This has long been used as a manipulation in this research domain (e.g., Moscovici and Personnaz, 1980).
We have likened this manipulation to the real-life experience of reading a newspaper article above which is a headline that conveys the percentage of people holding a view, normally referring to a recently conducted poll (e.g., “Exclusive poll reveals 68% of English voters want own parliament,” *Daily Telegraph*, November 26, 2006 and “Only 34% back being in the EU,” *Daily Mail*, December 12, 2006, see Gardikiotis et al., 2004, for an analysis of “majority” and “minority” terms in newspaper headlines). As we reported earlier, we have also varied the size of the majority–minority difference (Martin et al., 2002, Experiment 3), and the adjectives used to describe either group (Gardikiotis et al., 2005, Experiment 2).

We acknowledge that such manipulations do not exhaust the range of possible operationalizations. The very first laboratory research on minority influence was actually carried out by Solomon Asch (1951), using his paradigm of face-to-face interacting members of a small group, some of whom were confederates. He investigated the impact of a lone minority member (a confederate) on naïve participants, and reported no influence at all. Indeed, the majority ridiculed the minority. This is not to say, however, that face-to-face minorities have no impact. Moscovici et al. (1969) also opposed two minority members (confederates) to four majority members of a face-to-face group. Far from being ineffective, a consistent minority was able successfully to influence the majority. But as Smith and Tindale (in press) note, whereas Moscovici’s (1976) early theoretical work regarding minority impact conceived of social influence as an interactive phenomenon, involving reciprocal influence between minority and majority factions, most of his empirical work highlighted a much narrower and less dynamic aspect of the influence process.

We do not think that either of these manipulations (percentages vs face-to-face groups using confederates) is preferable to the other; they reflect different operationalizations of the same conceptual variable, as should be the case in a representative research program designed to yield generalizable results. However, as Smith and Tindale (in press) warn, we should be alert to the possibility that some findings may be paradigm-specific (e.g., it might be primarily, or even exclusively, in freely interacting groups that minority influence is more likely to be indirect rather than direct, found in private than public, and delayed rather than immediate). There are also many research questions that can only be addressed with more dynamic paradigms (e.g., see Prislin’s studies on changing relations of size between majorities and minorities; for reviews see Prislin, in press; Prislin and Christensen, 2005).

There are, of course, constraints on being able to conduct research using real groups: it takes much longer and, with the group as the unit of analysis, it would require huge numbers of participants to carry out the kinds of multifactorial studies we have reported. It remains the case, moreover, that such interacting groups are not suitable for investigating our main concern here, namely message processing of majority and minority sources, where it
is essential to keep different messages separate and to obtain detailed measures of scrutiny that refer to discrete arguments. We should also not lose sight of the fact that minorities and majorities in the real world do not differ simply in terms of numbers. Positions of power are often occupied by majority, rather than minority, members, giving them direct control of important outcomes for minorities, and there are often differences of status as well as size (for a discussion see Vocci et al., in press).

Moving in a less social and more cognitive direction, we believe that future research could usefully exploit priming paradigms (e.g., Bargh and Pietromonaco, 1982), using both supra- and subliminal manipulations, to further our understanding of the processes underlying majority and minority influence. Priming could be used to manipulate not only the size of the source, but also its connotations. It is well known, for example, that being in the minority, especially under conditions where group consensus is required, reduces liking and acceptance of the minority source of influence (Levine, 1980); and research by Mugny and Papastamou (1980) contrasted positive and negative views of the minority as, respectively, “flexible” versus “rigid.” Consideration of how we view minorities in society confirms immediately that they can have either positive (e.g., elites, experts) or negative (e.g., deviants, loners) connotations. When talking about minorities who are our heroes (whether Aung San Suu Kyi or Bob Geldof), we might be inclined to use the words “indefatigable,” “determined,” or “courageous,” but when talking about some minorities (whether animal-rights protesters or anti-abortion groups), they become “intransigent,” “dogmatic,” and so on. Priming techniques could be used to investigate the consequences of characterizing what Hitchens (2001) calls “contrarians” as “dissidents,” “radicals,” “mavericks,” “loose cannons,” “rebels,” “fanatics,” “troublemakers,” and so on.

6.1.2. Assessing elaboration by means of thought listing

All of the key studies in our research program use the thought-listing technique to assess the degree of message recipients’ elaboration of majority versus minority messages. The introduction of the thought-listing technique into this area (by Maass and Clark, 1983, Experiment 2) was a welcome addition to an area that assumed much, but measured little, about processing. However, persuasion researchers acknowledge that there are still problems with what remains a central dependent measure for much persuasion research. In particular, recipients may be differentially motivated to generate and/or report thoughts that justify the attitude expressed, as a function of movement towards a majority versus minority message (for reservations about thought-listing, see Miller and Colman, 1981). However, a series of elegant studies by Romero et al. (1996) do provide compelling support for the cognitive mediation hypothesis across a range of paradigms.
Miller and Colman (1981) note that thought listing is, essentially, a measure of introspection, which psychologists have long treated with suspicion. Research on both the ELM and HSM models, including our own, seeks to overcome any inherent weakness of this technique, to some extent, by relying heavily on the manipulation of strong versus weak arguments, in conjunction with measurement of thought listing, to demonstrate information-based systematic processing. Thus, it is the comparison of thought listing, whatever its demerits, between argument conditions that is crucial. When systematic processing occurs, people should be more persuaded by messages that contain strong rather than weak arguments (the “argument quality effect”); when nonsystematic processing occurs, the nature of the arguments has no significant impact on persuasion.

A further issue with the thought index (see Miller and Colman, 1981) is the order in which thoughts and attitudes should be measured. On the one hand, because thoughts are the putative mediator of attitudes, one can argue that the order thoughts-attitudes is the more logical, or appropriate, given the theoretical model explicit in the cognitive theories of persuasion that thoughts cause (and therefore must precede) attitudes (see Wood et al., 1996). The order adopted in our own research has therefore been for participants to give their thoughts in response to the persuasive message prior to filling in their attitudes. On the other hand, one could argue that asking participants to list thoughts might induce them to do something (e.g., think) that they might not normally do (perhaps in response to a particular source or argument that they would otherwise ignore).

From the outset, we thought it unlikely that this procedural difference could account for the different results reported across studies, because Petty et al. (1976) compared the two orders of thoughts and attitudes in a standard attitude-change paradigm (i.e., one that did not manipulate majority vs minority source) and found no difference. However, it is conceivable that order of measures could interact with source status, and for this reason we conducted a study that varied the order of thoughts and attitudes. Using the topic of voluntary euthanasia, we presented participants with a counter-attitudinal message that was anti-voluntary euthanasia (Martin and Hewstone, 2001). Thus, the design of the study was a 2 (order of measurement: thoughts-attitudes vs attitudes-thoughts) × 2 (source: majority vs minority) × 2 (argument quality: strong vs weak) factorial. We found an argument quality effect only for the minority source, and this occurred regardless of the order of the measurement of the dependent variables (see Fig. 5.10).

Although we believe that our research has dealt with most of the critical issues surrounding the use of the thought-listing technique, we should point out that, although relatively convenient, it is not the only possible means of assessing elaboration. Cacioppo et al. (1986b) showed that the electromyogram (EMG) could be used to measure both the valence and intensity of emotional reactions, and it would be interesting to introduce such measures
into this area. The rise of social cognitive neuroscience (Ochsner and Lieberman, 2001) also offers exciting possibilities here, including use of techniques to measure (e.g., functional magnetic resonance imaging, fMRI, and event-related potentials, ERPs), and to disrupt (Transcranial Magnetic Stimulation, TMS) brain activity. If minority messages are processed more systematically, we might expect to see greater activity in the medial frontal cortex in recipients of minority messages studied while in a scanner (see Amodio and Frith, 2006), and also to detect greater activity in scalp sites over the frontal cortex (e.g., Ito and Urland, 2003). Similarly, if recipients of a minority message were subjected to TMS in the area found to be active during processing of such messages (e.g., Harmer et al., 2001), then processing should be interrupted, and previously reported differences between the source conditions should be attenuated.

### 6.1.3. Single versus dual source paradigms

All the studies from our research program reported in this chapter have used a single-source paradigm: participants received either a majority or a minority message. However, there is an alternative paradigm that can be, and has

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Figure 5.10  Attitude scores as a function of measurement order, source status, and argument quality (Martin and Hewstone, 2001).

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6 It is useful to note that in our studies that examined resistance to a countermessage we did, in fact, expose participants to two messages, each representing a different source position (Martin et al., 2003; Martin et al., 2008a). However, in these experiments, each source message was presented in a sequential order, delayed in time, with attitudes taken after exposure to each. In this section, we consider the issue of presenting both majority and minority messages simultaneously.
been, used in research on majority-minority influence: participants are exposed simultaneously to both majority and minority influence (see Maass and Clark, 1983; Mackie, 1987). However, these studies used different manipulations of source, and different topics, and reported contrasting results. Maass and Clark provided participants with a transcript of a group, whereas Mackie provided consensual support for attitudinal positions. Maass and Clark (1983) found that a minority source induced greater attitude change than a majority source on a private measure of attitude, whereas the majority had a stronger effect when respondents believed that their attitudes would be disclosed in public. Mackie (1987), in contrast, reported that the majority had greater impact than the minority on both public and private measures. We do not wish to engage in a discussion of which of these findings is “correct,” but rather to acknowledge the strengths as well as the shortcomings of the dual-source paradigm.

In our view, the dual-source paradigm is not any “better,” more “realistic,” or more “accurate” a representation of majority-minority influence settings than our own single-message paradigm. It simply reflects one type of setting, where both groups’ opinions may be presented in juxtaposition. This happens sometimes in real life (e.g., committee meetings), but not always (e.g., newspaper headlines, leaflets dropped through doors and mailboxes attempting to persuade recipients to vote for a particular party or policy). We see both approaches as representative of the range of settings in which we should study majority-minority social influence. Furthermore, we admire Maass and Clark, and Mackie, for engaging in the complexities of the dual-message paradigm, which is more complex than the single-message paradigm. However, it is this very complexity which led us to eschew it, given our focus on message processing. In order to draw conclusions about the extent of argument scrutiny for majority versus minority sources, comparing strong and weak messages, we believe that the single-source paradigm is preferable. As Chaiken and Stangor (1987) pointed out, a within-subjects design is inappropriate if one is interested in the amount of thinking instigated by a specific source. Nonetheless, we fully acknowledge the contribution made by dual-source studies, whose complexity is perhaps reflected in their relative scarcity, and argue that a full understanding of majority-minority influence will only be achieved via research using a wide range of paradigms. Ideally, these should range from single-source studies, through dual-source studies, to studies of face-to-face interaction in real groups.

6.1.4. The curious absence of control conditions
The main focus in our research program (see Section 5, above) has been to compare thought-listing and attitude measures in recipients of majority and minority messages comprising either strong or weak arguments. This has also been the standard factorial design adopted in research by other scholars.
on this topic (see Section 3, above). The focus in the broader literature on 
majority-minority influence (i.e., dealing with judgments and physical 
stimuli, and not just attitudes) has also been on this comparison (although 
some studies have drawn conclusions, unwisely in our view, on the basis of 
just one source). However, whereas explicit comparison simply of majority 
and minority sources suffices to answer certain questions (which source 
leads to greater attitude change?, which source is associated with greater 
argument scrutiny?), multiple control conditions would be required to 
answer additional questions.

Stroebe (in press) was the first to consider which additional control 
conditions would be needed to assess further hypotheses derived from the 
ELM and the HSM. For example, to test the hypothesis that message 
recipients might (under some circumstances) wish to distance themselves 
from a negatively viewed minority, one would need a message-only control 
condition, in which participants were exposed to the same message as other 
participants, but without being told that the source was either majority or 
minority. Stroebe explains that without this particular control condition it is 
not possible to ascertain whether any biasing effects are due to the majority 
source inducing a positive bias (i.e., more positive than the control) or the 
minority source inducing a negative bias (i.e., less positive than the control), 
or both. Stroebe notes that only one study appears to have run this control 
condition (Erb et al., 1998). Notwithstanding its utility for testing such 
hypotheses, the adoption of such a control condition is not without diffi-
culty; the problem is that participants may infer the source of the message 
when none is given, and, given the false consensus effect (Ross et al., 1977), 
they are likely to infer a pro-attitudinal majority and a counter-attitudinal 
minority. This problem may explain, in part, the curious absence of this 
control condition. Stroebe argues, however, that this condition is essential 
for testing hypotheses about the impact of consensus information on the 
processing of persuasive arguments. We believe that it is the most important 
control condition for our research focus.

The researchers’ task is made still harder by Stroebe’s (in press) argu-
ments (strong ones, at that) in favor of two further control conditions. The 
first, consensus-information only, would specify majority or minority source, 
but present them without any persuasive arguments, allowing the researcher 
to assess the impact of the consensus information as a peripheral cue (only 
one study appears to have included this control condition; Mackie, 1987, 
Experiment 4). The third and final control condition, is a no information 
condition (where neither consensus information nor message is given) as a 
baseline for assessing the amount of majority and minority influence.

But perhaps the absence of these control conditions is not so “curious” 
after all. As a cursory review of studies reported in this chapter reveals, most 
of the experiments conducted, especially those in our own research pro-
gram, are complex, multifactorial experiments involving between-subjects
manipulation of source (majority vs minority), argument quality (strong vs weak), and then some additional factor that adds value to the literature (e.g., low vs high relevance; positive vs negative personal outcome; low vs intermediate vs high elaboration). Adding multiple control conditions would, however, significantly increase the complexity of the design. As a compromise, for now, we suggest that future research should begin systematically to include some of the control conditions, beginning with the key message-only condition.

6.1.5. Summary
Although there is clearly room for more research using, and comparing, operationalizations of the key source variable, the manipulation we have used thus far can be defended on sound methodological grounds, as can the use of both the thought-listing procedure and the single-source paradigm. Future research should become both more and less social. More social, in that it would include some studies using interacting groups (both with, and without, the use of confederates) and simultaneous presentation of majority and minority messages. Less social, in that it would exploit priming paradigms and social neuroscience methods to explore in greater depth information processing in majority and minority influence.

6.2. Theoretical issues and future research
Although we have worked on this research program for over a decade, we acknowledge that we have barely scraped the surface, in terms of what could still be achieved using this approach. We begin, remaining within the confines of our adopted paradigm, by considering how best to exploit the rich potential of the cognitive approach to persuasion. We first explore further hypotheses concerning how source status might impact on information processing and attitude change, and then consider the possible role of need states and individual differences. Next, we adopt a different approach to explore the neglected “phenomenology” of majority-minority status, by looking at what is “special” about minority status and how that impacts on the arguments minorities advance and defend. Finally, we move even further from the laboratory-based message-processing approach we have adopted thus far to speculate about the missing link in social change between minority influence and social movements.

6.2.1. Realizing the full potential of dual-process models of persuasion for the study of social influence
We hope that this exposition of our research program has shown, at least, some of the gains of applying a cognitive-persuasion (message-processing) approach to the study of majority and minority influence. However, both the ELM (Petty and Wegener, 1998) and the HSM (Bohner et al., 1995) are
complex, sophisticated models that include a wide range of variables that we have not touched on, and allow for types of processing we have not yet explored. Other research (see Bohner et al., 1995; De Dreu et al., 1999; Erb and Bohner, 2007, in press) has made greater use of the HSM in its study of majority-minority social influence than we have, and Stroebe (in press) has outlined the full range of predictions that could be derived from dual-process theories concerning the impact of majority and minority influence on the processing of persuasive messages (from which we sample just a few).

In particular, the HSM (Bohner et al., 1995) assumes that under high levels of motivation and ability both systematic and heuristic processing modes are likely to affect persuasion. Future research could, for example, explore evidence for the HSM’s “additivity hypothesis” (e.g., when both heuristic and systematic processing point to the same conclusion both heuristic cues and content information exert main effects on persuasion). Thus, one might manipulate both the expertise of a minority (low/high) and the quality of its arguments (strong/weak). As Stroebe (in press) suggests, however, if the expert source presents many strong arguments, then the HSM’s “attenuation hypothesis” may be confirmed, whereby the independent effect of the heuristic cue is weakened by the mass of content information.

Stroebe (in press) also suggests investigation of the different types of motivation conceived by the HSM to underpin attitude change—accuracy, impression, and defense. As he points out, accuracy motivation encourages objective and unbiased information processing. In contrast, impression motivation (with its focus on the expression of socially acceptable attitudes) is likely to be aroused in influence settings in which the identities of significant audiences are salient, or people must communicate their attitudes to others who have the power to reward to punish them. He predicts that, given people’s concern to be liked by others (Deutsch and Gerard, 1955) and especially by the majority, impression motivation should favor majority over minority influence. We know of no work that has explicitly manipulated these types of motivation and investigated their impact in this area.

Research has, at least, begun to explore processing ability that, along with motivation, is central to both ELM and HSM. As we reported earlier, we investigated majority versus minority influence by comparing message processing under low, intermediate, and high elaboration conditions (using both cognitive and motivational manipulations; Martin et al., 2007a). We found a heuristic effect for the majority in the low elaboration condition, an argument quality effect for the minority in the intermediate condition, and an argument quality effect for both majority and minority in the high-elaboration condition.

We know of only one study, however, that has manipulated processing ability directly, as done for the ELM (e.g., using a distraction paradigm) and compared majority and minority influence (Schuurman et al., 1995;
see De Vries et al., 1996). In the distraction condition, contrary to the idea that numerical support might serve as a heuristic cue (e.g., “consensus implies correctness”), there was no difference in the impact of majority and minority sources; however, in the no-distraction condition, majority support produced more favorable attitudes than did minority support. As De Vries et al. (1996) point out, this experiment leaves open whether distraction interferes with reception, rather than systematic processing. This could, of course, be shown in an experiment that manipulated distraction, source, and argument quality.

Future research should therefore compare majority and minority influence in classic distraction paradigms used in attitude research (e.g., Petty et al., 1976), but also in single- versus dual-task paradigms (e.g., Macrae et al., 1994), which can reveal how much processing capacity is usurped by the type of processing engaged for each source (e.g., see Pendry and Macrae’s, 1994, Experiment 2, use of a probe reaction time measure, based on Bargh, 1982). If our theorizing is correct, minority influence both triggers and requires deeper, more time-consuming processing; it should therefore usurp more cognitive capacity, leaving less residual capacity for secondary tasks.

6.2.2. Investigation of need states and individual differences

Thus far, our research program has neglected this topic; however, findings from the vast literature on attitude change suggest that some measures of individual difference might moderate effects of interest, and that manipulation of need states might also impact the effectiveness of influence. Need for cognition (NfC) is an obvious first measure to explore, because research has shown stronger argument quality effects on attitude change for individuals with high rather than low need for cognition (Cacioppo and Petty, 1982; Cacioppo et al., 1996). Need for cognition has also been shown to affect attitude strength. Haugtvedt and Petty (1992) reported that attitude change in respondents with a high need for cognition was more persistent and more resistant against counter-argumentation than in individuals with low need for cognition. It is not clear immediately, however, how NfC might interact with majority-minority status. One hypothesis is that those who frequently engage in and enjoy effortful cognitive activity might be more willing to consider different views, including that of the minority and not just the majority.

Relatedly, Neuberg and Newsom (1993) proposed that individuals differ in the extent to which they are dispositionally motivated to simplify and structure their environment. The Personal Need for Structure scale (PNS, Thompson et al., 1993) measures people’s chronic need for a simple structure, and correlates positively with people’s likelihood of organizing both social and nonsocial information in less complex ways (Neuberg and Newsom, 1993, Experiment 3).
The need for a simple structure has recently been conceptualized as part of a broader construct, the need for cognitive closure (see Neuberg et al., 1997), which has also been proposed to differ chronically across individuals. It has been measured as a dispositional variable using the Need for Closure scale (NFCL, Webster and Kruglanski, 1994), and obtained results included greater resistance to persuasion when prior information was present, and less resistance when no prior information was given (Kruglanski et al., 1993). Once again, it is not obvious how these variables might interact with majority-minority status. However, it appears plausible that message recipients with higher PNS or NFCL scores might be more inclined to go along with the safe majority, than entertain the views of the minority. Consistent with this idea, De Dreu and Koole (1997) found that experimentally lowering participants’ need for closure reduced their tendency to use the “consensus implies correctness” heuristic. Finally, Shuper and Sorrentino (2004) explicitly examined the relationship between people’s uncertainty orientation and majority and minority influence.

Two final variables that might be interesting to explore in this context are the needs for uniqueness (conceived as a trait; Maslach, 1974) and the need for distinctiveness (considered as a need state; Brewer, 1991). A number of authors have alluded to the link between minorities and uniqueness. Crano (in press), for example, has argued that the minority enjoys the advantage of relative uniqueness. Meanwhile, Erb and Bohner (in press) have linked minority influence and deindividuation. On the basis of research findings showing that individuals sometimes strive to avoid deindividuation (e.g., Snyder and Fromkin, 1980), they proposed, and reported support for the idea, that low-consensus positions allow deindividuated individuals to regain a feeling of uniqueness and social distinction (Imhoff and Erb, 2006; cited in Erb and Bohner, in press). This research manipulated deindividuation, and future research might also explore the individual difference measure of “need for uniqueness” as a moderator of minority influence. Given that certain types of cultures (i.e., individualist) emphasize the uniqueness of individuals more than others (i.e., collective; Triandis and Trafimov, 2001), there is also a niche for cross-cultural studies of minority influence (see Ng and Van Dyne, 2001).

Relatedly, optimal distinctiveness theory (Brewer, 1991) argues that individuals seek identification with social groups in order to satisfy two basic, independent psychological needs (inclusion/assimilation and differentiation/distinctiveness). This is an important theoretical perspective on self and identity that, in our view, also has implications for the social influence literature. For example, classic theorizing on social influence assumes that majority influence is caused by group members’ dependence on the group (Festinger, 1950). Yet, research on optimal distinctiveness generally reveals the positive value of numerical minorities for reasons of greater group distinctiveness (see Leonardelli and Brewer, 2001). Although this is not an
individual-differences perspective, we believe that manipulation and measurement of optimal distinctiveness as a situational or individual difference variable has something to offer research on majority-minority influence. In fact, we would predict, generally, that individuals with a higher need for uniqueness or a need for distinctiveness would be more susceptible to minority influence than individuals with a lower need for uniqueness or distinctiveness; and that, correspondingly, individuals with a higher need for assimilation would be more susceptible to majority influence.

6.2.3. The “phenomenology” of majority-minority status

Our research program to date has focused exclusively, as has all prior research on both majority and minority influence, on the target, rather than on the source, of influence. We have studied in detail the information processing involved, and its consequences, when message recipients are exposed to majority and minority sources. Research has, however, generally neglected the behavior of sources of influence (for exceptions, see Levine and Kaarbo, 2001; Gordijn et al., 2001; Zdniuk and Levine, 1996). We have recently reversed this focus by examining the nature of the arguments generated by individuals who find themselves in either a numerical majority or minority (Kenworthy et al., in press). If arguments presented by minorities and majorities can produce differential scrutiny and outcomes (e.g., Baker and Petty, 1994; Martin and Hewstone, 2003b; Mucchi-Faina et al., 1991), then what effect does majority versus minority status have on argument generation?

We began to think along these lines because we were surprised at, and disagreed with, a claim made in the literature. Maheswaran and Chaiken (1991) proposed that the combinations of majority source-weak message and minority source-strong message are “incongruent” and thus trigger deeper processing (see also Baker and Petty, 1994). Yet, from the perspective of Moscovici’s (1980) conversion theory, we would argue that there is nothing incongruent in the combination of minority source and “strong” message. Minorities are often deeply committed, and this is arguably their greatest attribute. As John Stuart Mill wrote: “One person with a belief, is a social power equal to ninety-nine who have only interests” (Mill, 1861/1924, p. 155). From this perspective, minorities might well be expected to have strong, not weak, messages (Gerard, 1985; Kerr, 2001).

We then began to consider what we refer to as “the phenomenology of minority numerical status.” Being in the numerical minority is typically aversive. Research from various domains of social psychology has shown that when people are in the numerical minority, they feel uncomfortable, stressed, and displeased (see Asch, 1956; Dion, 2002; Guinote et al., 2006; Kenworthy and Miller, 2001, 2002; Lücken and Simon, 2005; Nemeth, 1986; Nemeth and Wachtler, 1983), as compared to those
in the numerical majority. With respect to attitudes and opinions specifically, the aversiveness and discomfort of minority numerical status, most likely due to a heightened need for validation of one’s beliefs and opinions (see Deutsch and Gerard, 1955; Kenworthy and Miller, 2001; Kruglanski and Mayseless, 1987), leads to a search for information that may support one’s position. A number of studies have demonstrated, consistent with this view, that numerical minorities (vs majorities) show increased cognitive activity of various types (e.g., Guinote et al., 2006; Levine and Russo, 1995).

Relatedly, studies on power show that individuals in powerful positions tend to focus their information-processing strategies on a single target, and ignore peripheral information, whereas individuals in powerless positions consider multiple sources of information, and generate additional information (see Guinote, 2008, for a review).

These results suggest that being in the numerical minority might produce more original, creative, argumentation, and are consistent with Zdaniuk and Levine’s (1996) findings that participants in a minority faction, anticipating a confrontation with a numerical majority, were less biased in favor of their own position during a thought-generation task than were numerical majorities (see also Levine et al., 1996).

In addition, as a function of their being outnumbered, numerical minorities must necessarily take multiple perspectives—both their own as well as that of the numerical majority—in order to reduce the threat of invalidation. By contrast, numerical majorities will be less motivated to adopt others’ perspective and to think in novel and creative ways to defend their position, because theirs has the weight of consensus (see Levine and Russo, 1995).

In three studies, we examined the effect of minority versus majority group membership on argument originality in the absence of any exposure to minority or majority messages (Kenworthy et al., in press). Our general hypothesis was that being in the numerical minority would lead to the generation of more original and creative arguments for one’s position, as compared to being in the numerical majority. The first two studies found reliable evidence that arguments generated by participants told they were in a numerical minority condition were indeed rated more original and convincing (by judges blind to experimental condition and hypotheses of the experiment) than those produced by participants in the numerical majority condition. Moreover, the effect was not influenced by a measure of either mood or need for cognition.

The third study replicated this minority–originality effect even when all participants were merely asked to imagine themselves as belonging to one of the numerical status factions taking part in a discussion group, and to generate arguments for a counter-attitudinal position instead of the one they reported favoring initially. In this way, we examined whether minority numerical status could produce stronger and more creative arguments even when the position being advocated was not initially endorsed (see Gordijn et al., 2001).
This design also allowed us to rule out an explanation in terms of vested-interests (see Crano, 1995), whereby participants’ own attitudes would likely be more elaborated (e.g., Petty and Krosnick, 1995). What is not yet clear is why numerical minority members produced more original arguments, regardless of whether or not they personally endorsed those attitudinal positions. Future research might explore whether creative arguments result from either a defensive motivation (e.g., being in a minority elicits a tendency to resist the weight of consensus held by the majority faction), or an offensive motivation (e.g., not wishing merely to demonstrate the validity of one’s position, but also to convert the majority faction to one’s point of view; see Levine and Kaarbo, 2001). Turning the spotlight from the target to the source of influence, as this new research does, also opens up the possibility of a new line of studies on minority influence. Thus, whereas prior research has found that minorities can be persuasive in converting majority members if they are consistent and confident (Moscovici, 1980, 1985; Moscovici et al., 1969), what remains to be seen is whether actual numerical minorities are consistent and confident across time in naturalistic settings. Research in this vein is in its infancy, but we hope that it will expand and add to a fuller understanding of both minority influence as well as the psychology of numerical status generally.

6.2.4. From minority influence to social movements

From the suffragettes to the Montgomery bus boycotters, history is littered with characters who kick-start progress by being awkward.

(Editorial in The Guardian newspaper; May 30, 2007)

You can alter policy. The individual is not powerless in the face of either political indifference or monstrous human tragedy. Let me say it embarrassedly, cornily, almost guiltily. Let me try to say it without sounding like some pious twat. You can change the world.

(Bob Geldof; The Guardian, December 28, 2005)

Individuals were, of course, crucial to the slave-trade abolition movement. Thomas Clarkson, founder of the Society for Effecting the Abolition of Slavery in 1787, was indefatigable. He rode on horseback round England to spread his message and collect signatures, and published 700 iconic posters showing a diagram of the slave-ship Brookes. Granville Sharpe was the writer of countless polemics of protest. Former slave Olaudo Equiano spoke out for those still in bondage and had huge influence through his autobiography. And, of course, William Wilberforce was ultimately successful in parliament. Yet, successful abolition required a social movement to achieve its goal, one that owes a huge debt to the networking skills and social organization of the Quakers. They were crucial in organizing the boycott of slave-grown sugar, joined at one time by more than 300,000 people. It is
fitting, in the present context, that Quakers are referred to as religious “nonconformists.” Determined, persistent, and persuasive as they may be, individual minorities often fail to have an impact unless they start a social movement. The anti-slavery movement can be seen as the prototypical social movement, involving popular agitation, legal challenges, and parliamentary lobbying (other examples include the Suffragettes in the UK, and the Southern Christian Leadership Conference, in the Deep South of the United States).

Klandermans (e.g., 1997), one of the leading scholars of social movements, includes as one of three key processes involved in whether movements take off; “persuasive communication during mobilization campaigns by movement organizations, their opponents and countermovement organizations” (p. 45), yet he stops short of an explicit analysis of minority influence. We believe that such an analysis would illuminate both areas, social influence and social movements. We think it highly likely that a persuasion-based approach to minority influence, such as our own, may be especially useful at the initial stage of a social movement (where people potentially engage with and listen to novel, cogent arguments), but that a categorization-based approach (e.g., David and Turner, 1996, 1999, 2001) may be more significant in catalyzing the social movement.

Stürmer and Simon (2004) propose that collective identity should foster social movement participation by four main processes: making group members’ self-esteem more dependent on the in-group’s status relative to other groups; increasing perceptions of collective strength and in-group cohesion as well as intergroup differentiation; fostering the perception of commonalities of interests, thereby promoting trust and cooperation; and, most important for our focus, promoting the acceptance of social influence from in-group members (whereas influence from out-group members is rejected). Highly identified group members should be more willing to accept social influence attempts from fellow in-group members, thus influence would progress in line with self-categorization theory. Individuals will perceive the minority in a wider context and begin to see the minority as “part of us” rather than ‘them’, basically on our side, standing for basic values that ‘we’ all share” (Turner, 1991, p. 171). It is for this reason that in-group minorities tend to have more public influence than out-group minorities (David and Turner, 1996, 1999), a fact apparently known to the Quakers, whose (out-group) voice against slavery had been ignored, until it was taken up by the Anglican Thomas Clarkson who could influence public opinion as an in-group minority.

We do not, however, wish to over-play the hand of minority influence. Although our research program to date has focused on persuasion, we acknowledge that bringing about social change involves much more than persuasion. For example, Garrow (1978), writing about Martin Luther King and the “Protest at Selma,” argues that King was forced to accept that an approach based on “non-violent persuasion” (p. 221, emphasis in the original) would not bring about reforms and reduce racial injustice. Instead,
he shifted to a strategy of “coercive nonviolence” (p. 221, emphasis in the original), based no longer on convincing his opponents, but on forcing progressive change in the American South.

6.2.5. Summary
One measure of the heuristic value of a new model and its associated research program is the extent to which it can guide future research. We have shown in this section that there is, first, still a rich vein to be exploited in terms of exploring the great potential of the cognitive approach to persuasion for the area of majority-minority influence. We have also proposed future research on individual differences and need states, highlighting the needs for cognition, structure, closure, uncertainty orientation, uniqueness, and distinctiveness. We have also suggested that research shift its focus from targets of influence alone, to include also sources of influence, and we have reported promising early research showing that minority sources generate more novel arguments. Finally, and more speculatively, we have called on research to integrate the findings from the literatures on minority influence and social movements, to provide a fuller understanding of the role of active minorities in bringing about real social change.

7. Conclusions
Dare to be a Daniel,
Dare to stand alone,
Dare to have a purpose firm,
Dare to make it known.
(‘Dare to be a Daniel’, Salvation Army hymn; cited by Benn, 2004, p. 11).

Daring ideas are like chessmen moved forward; they may be beaten, but they may start a winning game.

(Johann Wolfgang Goethe)

7.1. Majority versus minority influence: When, not whether
Much time and effort in earlier studies of majority-minority influence went into answering the question of which kind of influence was stronger, majority or minority. Thanks, first, to Moscovici’s (1980) conversion theory, and, second, to the success of the contingency approaches (reviewed in Section 2.2), we believe that this question is no longer worth asking. Prior to our research, studies had already shown that the answer depends on whether attitude change is assessed in public versus private settings, and on direct versus indirect measures (Wood et al., 1994). In this chapter, we have added to this prior work by showing, consistently, that it also depends on the “context.”
According to both our review of the pertinent literature and the extensive results of our own research program, neither source, majority or minority, leads exclusively to more processing. Rather, whether the majority, or the minority, or both instigate elaborative message processing depends on a range of factors, including the nature of the topic (e.g., threatens self-interest, or not); and both cognitive (e.g., level of elaboration) and motivational (e.g., personal involvement) factors affecting ability and effort. The results of our research program show, for the first time, that minority influence is likely to lead to message processing when the topic does not threaten self-interest, and elaboration level is intermediate or high, and that this elaborative processing results in stronger attitudes that resist counter-persuasion, persist over time, and guide behavior.

These findings underline an important change in the questions we should ask about this domain of social influence. We should no longer ask whether the majority or minority can instigate elaborative processing, but when either source does so. It seems that neither the majority nor the minority can persuade all of the people all of the time. Our research, using a range of attitude topics and paradigms, suggests that elaborative processing may often be the default, faced with a minority source, but that either source can, in principle and in practice, trigger elaborative processing.

7.2. Minorities, democracy, and fairness

Although we tend to think of “persuasion” as something studied in our laboratories, Dunn (2005) has made an eloquent case for persuasion (in contrast to coercion) as being central to the practice of democracy, and he claims that it has been ever since its Athenian dawn. But, as John Stuart Mill (1859/1986), the great advocate of minorities, emphasized, within a democracy, there should not be tyranny of the majority over the minority. Democracy as majority rule is not without limitations and problems. Minorities must be protected, and we should be aware that democracy can lead to the accumulation of power and its abuse by an electoral majority. This happens in many parts of the world and, ironically, nonelected governments in some countries are considerably more liberal than democratically elected majorities (see Zakaria, 2004, for a detailed discussion). Minorities should also be listened to and engaged with. An appropriate guiding text would be the sentiment attributed to Voltaire, “I disapprove of what you say, but I will defend to the death your right to say it.” But because Voltaire, in fact, never said it (Pearson, 2005, traces the phrase to Tallentyre, but as a paraphrase of Voltaire’s attitude), we propose as a guiding philosophy what he did say, “I am a tolerant man, and I consider it a very good thing if people think differently from me” (Voltaire, 1737; quoted in Pearson, 2005).

Within any democracy that is worth its name, and if it is to be a participatory and not merely a representative democracy (Ginsborg, 2005),
it is crucial that minorities are recognized, respected, treated fairly, and encouraged to speak up. Noelle-Neumann (1993) has referred to a “spiral of silence” phenomenon in the media, such that people are less likely to speak out when they believe they hold a minority opinion, which should lead other members of the minority to underestimate the consensus of their view, and members of the majority to overestimate the consensus of their view (see Glynn et al., 1997, for a review; and Hornsey et al., 2003, for evidence that under some conditions knowledge that one is in a minority position can motivate people to act even more strongly in line with their attitudes).

7.3. Epilogue

The philosopher Michael Oakshott argued for the unceasing exchange of ideas between people of different beliefs and opinions that he termed “the conversation of mankind” (see Franco, 2004). Whether in the Supreme Court, parliament, or our faculty committees, one would hope that we would all, ultimately, be swayed by the best arguments, sometimes even arguments we do not initially personally agree with, made by people with whom we do not normally agree (what legal experts call “deliberativeness”), and expressed by those in a numerical minority. Indeed, while writing this piece, one of us, an aggressive nonsmoker, found himself sitting in a college meeting at which the authorities were just about to ban smoking completely from all premises. He found himself, first, intrigued by the courage of the lone spokesman for the tiny rump of collegiate smokers; then listening to the eloquent, cogent arguments; then changing his mind about banning smoking from the college; and finally voting against it!

This is the supreme gift of minorities: they can make us listen, to a new voice, and sometimes they can persuade us; but above all they often provide a novel perspective. Going back to the halcyon days of Solomon Asch’s (1956) studies of majority influence, and the subsequent “dependency” perspective on group influence, we are struck by the parallels between Serge Moscovici’s own minority position arguing for the influence of minorities against the dominant perspective of majority influence, and the very phenomenon whose study he initiated.

We believe that there is also a certain romance to minority influence, and we admit that we have succumbed to it. Inspired many years ago, as students, by the original, consistent, and exciting message of Moscovici’s (1976, 1980; Moscovici et al., 1969) writing on the topic, we have both been not merely influenced, but persuaded. As our own experiments have shown, minority messages seem to have an advantage when it comes to perlustration, inviting attention and exerting an influence that can be direct, but is often indirect, latent, and removed in time (Wood et al., 1994). They can, moreover, help us to see the world differently, adopt new, more critical perspectives and ideas, and be agents of social change (Nemeth, 1986; Moscovici, 1976). The value
of minority influence, with its ability to shift not just what we think but how we think, reminds us of the sage advice of Francis Bacon (1625, Book I. i. 3), “If a man will begin with certainties, he shall end in doubts; but if he will be content to begin with doubts, he shall end in certainties.”

Yet, after the initial impact of Moscovici’s ideas in the 1970s, taken up by several European scholars (notably Mugny, 1982; Mugny and Pérez, 1991), the area of majority-minority seemed to have slipped into a period of torpor, as if there were no more work to be done, or no new theories and methods to guide the work. It is almost as if the very topic, its theories, and its pioneers have been forgotten. Astonishingly, a recent volume on “social influence” (Pratkanis, 2007)—listing the key phenomena/theories of the field of social influence, and its pioneers—failed to list either minority influence, or Serge Moscovici. We believe that the marriage of European and North American ideas adopted in our theoretical model (splicing conversion theory and cognitive models of persuasion) has brought new understanding to this area, making sense of a heretofore disparate set of results; we hope that our new integration will help to re-invigorate the area, and guide much further research too.

ACKNOWLEDGMENTS

The publication of this chapter, to which we have made equal contribution, gives us an opportunity to integrate over a decade of joint research. Many of the ideas were hammered out over all-day breakfasts and Indian meals, in various locations around the world, but we hope that the present product, notwithstanding its bulk, is not equally indigestible. We gratefully acknowledge various sources of funding over the years for this program of work, including (to both authors) the Economic and Social Research Council, and (to Robin Martin), the Australian Research Council. We also thank the graduate students, research staff, and other collaborators who have made major contributions to this endeavor; these are made explicit in authorship of primary studies, but we especially thank Antonis Gardikiotis, Jared Kenworthy, John Levine, Pearl Martin, and Joanne Smith. We are very grateful to the following people for comments on a previous draft of this chapter: Gerd Bohner, Bill Crano, Carsten de Dreu, Jared Kenworthy, Pearl Martin, Serge Moscovici, Gabriel Mugny, Charlan Nemeth, Rich Petty, Wolfgang Stroebe, Zak Tormala, and Mark Zanna.

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