

**Contextual Priming and Attitude Change Processes:  
Advertising Context, Elaboration, and Attitude Strength**

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**This dissertation is dedicated to my son, Herman**

## ABSTRACT

The advertisements consumers are bombarded with every day normally occur in a context. Editorial stories in print media, TV shows, and other advertisements or commercials are examples of such contexts. The context in which advertisements are embedded can vary in congruity with the content of the advertising messages. This dissertation first asked if attitudes formed under different levels of congruence between content of advertising context and the content of the advertisement arise from different levels of elaboration. If level of congruence gave different levels of elaboration, the second question was: do attitudes formed under different levels of congruence between content of advertising context and the content of the advertisement differ in attitude strength? To guide the search in answers for these theoretical questions, this dissertation focused on an integration of the literatures of on the concept of priming and the theory and methods from research on attitude change.

The basic hypothesis derived from the multiple roles of persuasion variables postulate of the ELM (Petty and Cacioppo, 1986) was that congruence between editorial context and advertisement content could lead to increased elaboration. In conditions with higher congruence, primed memory content would be more applicable to advertising content, thus increasing elaboration likelihood compared to conditions with lower congruence. The following hypotheses were suggested: at different levels of congruence we expected: a) brand attitude extremity should differ, qualified by sensitivity to argument quality, b) content of cognitive responses would differ, qualified by sensitivity to argument quality, c) correlation between cognitive responses and brand attitude would differ, and d) correlation between brand attitude and purchase intention would differ. These hypotheses were tested in a 2 (prime congruence: congruent vs. incongruent)  $\times$  2 (argument quality: strong vs. weak) between subjects factorial design ( $n = 137$ ). Congruence was manipulated by crossing a functionally positioned advertisement with a prime story with either a functionally or experientially content. Participants were undergraduate students of Ohio State University.

Results showed that congruently primed participants were significantly more sensitive to the argument quality manipulation ( $F(1,133) = 9.8, p = .002$ ), that correlations between the cognitive response index and brand attitudes were higher for congruently primed participants (Fisher  $z = 2.48, p < .01$ ), and that correlations between brand attitudes and purchase intentions were higher for congruently primed participants (Fisher  $z = 1.81, p < .04$ ). The predicted interaction between prime congruence and argument quality on the cognitive response index failed to reach significance.

In response to the second question, the next assumption based on the ELM (Petty and Cacioppo, 1986; Petty, Haugtvedt, and Smith, 1995) was that if congruently primed attitudinal responses resulted from higher message scrutiny than incongruently primed attitudinal responses, congruently primed attitudes should be stronger. Consequently, it was hypothesized that both brand attitude, and confidence in that brand attitude would resist counter attack messages better in congruent compared to incongruent prime conditions.

The second study kept and crossed the strong argument quality version of the advertisement with the same editorial stories as in study 1. Additionally, a counter argument message in two versions: strong and weak was developed. Brand attitudes and brand attitude confidence were measured pre and post attack, thus the design of study 2 was a 2 (counter argument: strong vs. weak)  $\times$  2 (prime congruence: congruent, incongruent)  $\times$  2 (time of attitude measurement: post advertisement, post counterattack) mixed factorial design with the first two treatments as between subjects factors, and the last a repeated measurement factor within subjects. Participants were 181 undergraduate students of Ohio State University. First, the results showed that the hypothesized prime congruence  $\times$  time of measurement interaction on attitude resistance was significant ( $F(1,177) = 8.73, p < .005$ ). Attitudes of congruently primed participants resisted counter attacks better than attitudes of incongruently primed participants even though the brand attitudes in the two conditions were not significantly different pre attack. Secondly, the hypothesized prime congruence  $\times$  time of measurement interaction on attitude confidence resistance was significant ( $F(1,177) = 9.26, p < .005$ ). The confidence attached to the attitudinal response resisted counter attacks better for participants in the congruent prime condition, compared with the incongruent prime condition.

In combination, the results from the two studies indicate that congruence between advertising context and advertising content can increase elaboration likelihood, and consequently also drive attitude resistance and attitude confidence. These questions have not been addressed by previous priming research, or by previous persuasion research. Particularly, priming researchers have normally not utilized manipulations necessary to assess elaboration, and persuasion researchers have not investigated the elaborative capacity of contextual priming. This dissertation contributes to both priming and persuasion research by examining the elaborative capacity of contextual primes in the form of editorial context of print advertisements. It also provides new knowledge about the strength of brand attitudes formed or changed in the presence of different contextual primes.

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It has been a while since people stopped asking me "are you done yet, have you submitted?" After a while, it became a bit too common to hear all my explanations why I still kept on writing and experimenting. That is why I am now looking forward to answering that question with "Yes!"

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# 1. INTRODUCTION

Picture yourself reading a business magazine, e.g., Forbes. You have just read an interesting story regarding how successful company executives organize themselves to become more efficient. When you turn the page of the magazine, a full-page, color advertisement for the new, enhanced PDA<sup>1</sup> from Casio catches your eye. It has infrared communication with your laptop, color-screen, spreadsheet, word-processor, mail-functionality, and a digital camera to name a few attributes. Do you think the attention you give to that advertisement is influenced by the story you just read? Do you think the judgment you reach about the PDA is influenced by the topic described in the story? Before saying yes or no, consider the opposite, a situation where you saw the advertisement without having read the story. What about a case where the story was about successful executives' culinary interests? In such cases, would you be equally attentive to the advertisement then, would you develop the same judgments about the product in the advertisement? Chances are no. Most likely, what you read prior to the advertisement would have affected you in some way, or more precisely, the context of the advertisement would have influenced how you process the advertisement. The story would have made some concepts in your memory more salient or accessible, and these concepts were still accessible in your mind when you saw the advertisement. Chances are that you are aware of the story you read, but not especially aware of *how* that story influenced the way you read the advertisement.

The relationship between advertising context and brand judgments may take several forms, specifically; the processes mediating the effect of advertising context on attitude towards the advertised brand may be different. Depending on the kinds of processes underlying the formation or change of an attitude, the attitude can differ in strength (e.g., Haugtvedt, Schumann, Schneier, and Warren 1994; Petty, Haugtvedt, and Smith, 1995). One can envision several different relationships:

- It could be that the advertising context fosters more positive brand attitudes because the context leads consumers to think more carefully about the brand's claims in the advertisement. This positive attitudinal response would be more likely if the nature of these thoughts were primarily favorable responses to the brand's claims.

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<sup>1</sup> PDA = Personal Digital Assistant

- This increased level of thinking could also lead to less positive (or negative) brand attitudes, a likely consequence if the nature of thoughts were predominantly negative to the brand's claims.
- The context could lead to more positive attitudes due to less thinking about the brand's claims. In other words, the consumer accepts the brand's claims more willingly due to the content of the context.
- The opposite could also be the case here, the context could lead to less positive (or negative) attitudes due to little elaboration about the brand's claimed attributes.
- Finally, the context might affect brand attitudes directly (positively or negatively), without affecting the extent of thinking about the brand's merits to a noticeable extent.

Hence, the advertising context could affect brand attitudes differently based on the extent to which the advertising context prompts different ways to elaborate (or not) on the content of the advertisement.

Businesses prefer that consumers' favorable judgments result in favorable consequences for their company's brand. For example if you were brand A, you would prefer that attitudes toward your brand to resist attacks (e.g., advertisements) from the competing brand B. In this perspective, one intriguing aspect of attitude formation is that two groups of consumers might reach the same conclusion, i.e., judge brand A with the same degree of favorability or unfavorability, regardless of the process leading up to this final judgment. However, depending on the process they go through, the attitude toward brand A for these consumers may be different in strength. Stronger brand attitudes should be more beneficial to the company than weaker, but equally extreme favorable brand attitudes. Consequently, in addition to investigating the effect of advertising context on elaboration of advertisement's content, this dissertation also addresses whether brand advertisements in different contexts give rise to brand attitudes of different strength.

## **1.1 Advertising context, priming and persuasion**

Despite the fact that some studies have shown effects of immediate advertising context on brand beliefs, research identifying how information processing is affected is scant. Even more rare are studies that include measures of processes mediating the effect of context on outcome measures. There are many possibilities for the influence of context on the processing of embedded advertisements. For example, advertising context could hinder or foster processing of embedded advertisements. Likewise, context could affect the ways in which

advertisements are elaborated upon. One of the important goals of this dissertation is to better understand how advertising context might be used as a means to facilitate processing of persuasive advertising messages.

*Advertising context.* Most advertisements occur in a context, simultaneously with other material such as programs on TV, editorial articles in magazines or newspapers, ads for other products, etc. Such material within which ads are embedded are usually referred to as advertising context (Soldow and Principe 1981). Many advertisers would consider this context as noise in the sense that the context may remove necessary attention from the advertisement and/or distort processing. However, information in the immediate context also may direct attention towards the advertisement, and its content. Advertising context can vary to a great extent, and an important decision is selecting an appropriate context for advertisements (e.g., Yi 1990a).

Advertising placement is typically a carefully considered strategy when it comes to the choice of media (e.g., TV, print, internet), the type of program (e.g., late-night shows, reality-TV, news-broadcasts, soaps), and the type of newspaper or magazine (e.g., New York Times, USA Today, Reader's Digest). The major consideration is normally which type of reader or viewer to reach. Such approaches can be characterized as a between-media focus. The assumption is that readers of the same newspaper share communalities, e.g., occupation, age, interests, lifestyle, etc. However, important context-effects may also arise within a medium. Past research has shown that what someone reads or sees immediately prior to advertising exposure affects how he/she attends to, thinks about, and evaluates the advertisement and the brand (e.g., Broach, Page, and Wilson, 1997; De Pelsmacker, Geuens, and Anckaert, 2002; Soldow and Principe, 1981; Yi, 1990a,b, 1993). There are theoretical and practical issues associated with such research. On one hand, such research attempts to answer the practical question of whether an advertisement for an Elizabeth Arden perfume will be processed differently if the reader first has read a story about the pop-artist Madonna, or a story about famine in the Sudan. Understanding these processes would aid in the decision as to which article marketers would like to have precede their advertisement. On the other hand, greater understanding of such processes may provide more insight into the fundamental processes of persuasion and attitude change. To guide the search in answers for these theoretical and practical questions, this dissertation focuses on an integration of the literatures on the concept of priming and the theory and methods from research on attitude change.

*Contextual priming.* Priming refers to “a procedure that increases the accessibility of some category or construct in memory” (Sherman, Mackie, and Driscoll, 1990). A basic question in this project is to what extent editorial material surrounding an advertisement may function as a prime in the sense that the story makes some parts of knowledge more accessible (i.e., they become primed). For example, reading a story about pop-star Madonna could prime ‘success’, ‘fame’ etc. On the other hand, a story about famine in the Sudan could prime ‘unfair’, ‘charity’, ‘Red Cross’, and perhaps even anger toward affluent consumption. Similarly, if a student reads a story about other students’ consumption patterns, motives or goals, he or she might get the same patterns, motives or goals primed. Following priming logic, the alternative stories, or primes could affect the way the subsequent advertisement for the new Elizabeth Arden perfume would be perceived and evaluated. In essence, they might serve as interpretation frames, or comparison standards (Stapel, Koomen, and Velthuijsen, 1998). More specifically, Higgins (1996) defines (contextual) priming effects as the influences on target impression formation that are the result of any non-target factor that makes particular knowledge relatively accessible – be it primed attributes or traits, exemplars, of the target category, moods, emotions or even personal goals and motivations (see also Bargh, 1997; Bargh and Chartrand, 2000, Chaiken, Giner-Sorolla, and Chen, 1996; Sedikides and Skowronski, 1991).

Segal and Cofer (1960) were among the first to use the term “priming” to refer the process or procedure where recent use of a concept in one task affects its probability of being used in a subsequent unrelated task (Bargh and Chartrand, 2000). Theoretically, the basic assumption is that accessible information will affect the subsequent processing of a message, or more precisely, that primes affect subsequent perceptions<sup>2</sup>. As indicated by Bargh (2002), priming is predominantly oriented towards the unconscious processes through which the preceding stimulus exerts its influence. However, as also indicated by Bargh (1992; 2002) there are two ways to deliver unconscious primes: either subliminally in which case the primes themselves are not accessible to the person’s awareness, or supraliminally, in which case the person is aware of the primes but not of their potential influence. Both forms have been shown to successfully influence judgments, motivations, and behaviors in social cognition research (Bargh, 1992). Editorial material or other advertisements in the print-

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<sup>2</sup> This assumption is mainly the same as the one set forth by Sedikides and Skowronski (1991) in their “Law of Cognitive Structure Activation LCSA”. However, as the priming tradition has matured more than the LCSA, and consequently is more extensively researched, this manuscript will adhere to the priming tradition.

advertisement context are not likely to be subliminal, as readers are aware of what they are reading.

The priming logic has been applied in some research on advertising effectiveness. For example, Yi (1990a) found that prior exposure to editorial material could prime certain product attributes and subsequently increase the likelihood that consumers interpret product information in terms of these activated attributes, thereby affecting the evaluation of the advertised brand. Yi (1990b) also found that cognitive priming (i.e., priming a certain product attribute) determined the type of interpretation given to product information in a subsequent advertisement, and thereby guided consumers' evaluation of the advertised brand (see also Appel, 2000; Broach, et al. 1995; Coulter, 1998; De Pelsmacker, et al. 2002; Murry, Lastovicka, and Singh, 1992; Moorman, Neijens, and Smit, 2002; Norris and Coleman, 1993; 1996; Soldow and Principe, 1981; Yi, 1991; 1993 for additional studies of advertising context-effects). Thus, there is evidence that perceptions and interpretations of advertisements (and brands within them) can be affected by priming manipulations prior to the advertisement. However, previous research has not explicitly addressed the extent to which contextual primes such as editorial context affect the nature of consumers' elaboration of advertising content. Consequently, the number of possible relationships between advertising context and brand attitude, and the role assumed by elaboration in these relationships remain ambiguous. Appendix 1 presents a review of studies that have explicitly addressed effects of contextual priming on advertisement and brand judgments.

Conditions may exist where there are varying degrees of match or congruence between the content of an editorial story, and the content of a brand's advertisement. In essence, congruence refers to an instance where the informational content of the context is applicable to the informational content transmitted in the embedded advertisement<sup>3</sup>. In the case of the Forbes reader described initially, he could have read about corporate executives efficient self-organization, *or* their culinary interests. The efficient self-organizing story would be somewhat congruent with the PDA advertisement, whereas the opposite would be true with the culinary interest story. Most businesses would prefer that the attitudes consumers hold toward their brands are strong enough to resist advertisements trying to sway consumers to competing brands. No previous research has shown if brand attitudes primed

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<sup>3</sup> Of course, congruence is in the eye of the beholder. In experimental terms, pretests can be used to ensure that the content of the editorial prime is congruent or incongruent with the brand concept of the subsequent advertisement



with editorial context are stronger (e.g., more resistant) than non-primed attitudes, neither have they shown if the confidence attached to attitudinal judgments are more resistant for congruently than incongruently primed customers. Because most advertisements do occur in a context, the question if varying degrees of congruence between editorial content and advertising content affect brand attitudes and attitude strength seems appropriate to ask.

An attitude's strength depends on the process through which it is formed (see e.g., Petty, et al. 1995). Previous research of contextual priming of advertisements has not routinely included sufficient measures of such processes, nor have they utilized manipulations necessary to detect differences in processing (cf. appendix 1). The subsequent paragraph outlines some key issues in this regard.

*Attitudes and persuasion.* Consumers' attitudinal responses to brand advertisements can be addressed through the attitude and persuasion theories, see e.g., Meyers-Levy and Malaviya (1999), Petty, Cacioppo and Schumann (1983), Petty and Cacioppo (1986), and Vakratsas and Ambler (1999). At the core of this research lays an interest in understanding the processes (cognitive and/or affective) that mediate the effect of a stimulus on subsequent attitude formation (Chaiken and Trope, 1999; Petty and Cacioppo, 1984; 1986; Petty and Wegener, 1998a). The assumption is essentially that effortful advertisement processing yields stronger brand attitudes than less effortful processing. When you consider the information in the advertisement carefully, you are more likely to establish a strong brand attitude, than when you devote less effort to processing. The level and content of consideration given to a persuasive message like an advertisement is called elaboration (Petty and Cacioppo, 1986), and as elaboration increases, attitudes are assumed to become more positive (if the content of elaboration is predominantly positive), and stronger.

In conditions with varying degrees of congruence between the content of the editorial context and the content of the advertisement, it is necessary to ask if the amount and nature of elaboration given to the content of the advertisement differs with varying congruence. This question has not been addressed by previous priming research, or by previous persuasion research. Particularly, priming researchers have normally not utilized manipulations necessary to assess elaboration, and persuasion researchers have not investigated the elaborative capacity of contextual priming. This dissertation contributes to both priming and persuasion research by examining the elaborative capacity of contextual primes in the form of editorial context of print advertisements. It also provides new knowledge about the strength of brand attitudes formed or changed in the presence of different contextual primes.

## **1.2 Research questions**

The preceding discussion suggests that the context in which the advertisement appears might distract, remove, or enhance processing. This dissertation seeks to merge the priming and persuasion literature in order to understand potential processes mediating contextual priming on persuasion. As most advertisements occur in a context, the assumption made here is that the content of advertisements will vary in congruence with the content of the editorial material preceding the message. It is likely that the extent of congruence has consequences for the elaborative process leading up to a brand attitude. However, because contextual priming is infrequently used in persuasion studies and because previous priming studies lack experimental manipulations necessary to detect mediating processes (such as the type and extent of elaboration), it is appropriate to phrase this as a general question, rather than a clear prediction:

**RQ 1: Do attitudes formed under different levels of congruence between content of advertising context and the content of the advertisement arise from different levels of elaboration?**

If advertising context hinders or fosters elaboration, the next logical question relates to the properties of attitudes primed by advertising context. Elaboration is assumed to affect attitude strength (Haugtvedt, et al. 1994; Petty, et al. 1995). For example, attitudes formed through more effortful processing could be more resistant to counter attacks from competing brands or other sources. However, as the elaborative consequences of priming on elaboration by means of advertising context are unknown, we set forth the second question:

**RQ 2: Do attitudes formed under different levels of congruence between content of advertising context and the content of the advertisement differ in attitude strength?**

These two research questions warrant some specification. First, the approach to these questions is guided by an integration of the priming paradigm and theories and methods from research on attitude change and persuasion. As part of the review it was pointed out that previous priming studies lack some manipulations necessary to investigate elaboration processes and attitude strength. It is therefore logical to build on the established tradition

when merging these two fields. To give the reader an introduction to the basic logic of the studies, the next section provides a brief overview of the two experiments in this dissertation.

### 1.2.1 Overview of studies

Elaboration plays an important role in the first research question. The manipulations needed to establish conditions that enabled detection of differences in elaboration as a function of congruence between the advertising context and the advertisement. The first manipulation in this project was a function of editorial material and an advertisement. Different combinations of primes and advertisement produced different levels of congruence. Specifically, two primes were utilized in conjunction with the advertisement to manipulate the extent to which congruence occurs. The primes had the form of feature stories from a fictitious Internet newspaper – the goal was to manipulate congruence by developing an advertisement with a brand concept profile that was either congruent or incongruent with the prime stories.

An advertisement for a new fictitious brand of shampoo was developed. The message arguments in this advertisement were functional (cf. Park, Jaworski, and MacInnis 1986) – leaving one condition where the prime was congruent, and one condition where the prime was incongruent. Additionally, as it was of crucial interest to be able to detect differences in processing across different contextual primes, the content of the advertisement was manipulated.

A method that has proven quite useful in gauging extent of elaboration is to vary the strength of message arguments<sup>4</sup> (Petty, Wells, and Brock, 1976). This manipulation involved creating parallel versions of the shampoo advertisement that differed in terms of the cogency of arguments, while keeping the brand concept profile of the advertisement essentially the same. Strong arguments should lead to more persuasion than weak arguments under high elaboration condition (congruent prime condition), whereas one would expect relatively less sensitivity to the argument quality manipulation in the low elaboration condition (incongruent prime condition). Cognitive responses were utilized as a second means of detecting differences in elaboration (Petty, Ostrom, and Brock, 1981).

Finally, a third manipulation was introduced in response to question 2 above. The resistance of attitudes formed under different priming conditions was examined by exposing consumers to messages containing counter-arguments to the product information in the advertisement. If brand attitudes and attitude confidence formed under different priming

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<sup>4</sup> Message arguments would here refer to the pieces of information presented in the brand's advertisement

conditions differ in resistance, this should be identified through differences in attitude and attitude confidence decay from pre- to post-attack attitude measurement.

The manipulations were administered in two experiments. The first study was a 2 (argument quality: strong vs. weak)  $\times$  2 (prime congruence: congruent, incongruent) randomized between subjects factorial design. The second study was a 2 (counter argument: strong vs. weak)  $\times$  2 (prime congruence: congruent, incongruent)  $\times$  2 (time of attitude measurement: post attitude measurement, post counter attack) randomized mixed factorial design with the first two treatments as between subjects factors, and the last a within subject factor.

## **2. THE PRIMING CAPACITY OF ADVERTISING CONTEXT**

The purpose of this chapter is to outline the principles of priming, and relate them to advertising context. Priming can primarily be seen as a methodological tool, but it is also important to understand the assumptions on which it is built, and potential explanatory mechanisms for why and how priming might work. Accordingly, this section starts defining priming, before turning to procedural issues, assumptions about prime-target, and comments on the explanatory mechanism.

### **2.1 What is priming?**

Priming studies are concerned with effects of current situational context and how these environmental features cause the average individual to think, feel, and behave differently than otherwise (Bargh and Chartrand, 2000:254). Advertising context might be conceived of as a situational context in this perspective. More specifically, Higgins (1996) defines (contextual) priming effects as the influences on target impression formation that are the result of any non-target factor that makes particular knowledge relatively accessible – be it primed attributes or traits, exemplars of the target category, moods, emotions or even personal goals and motivations (see also Bargh, 1997; Bargh and Chartrand, 2000; Chaiken, et al. 1996; Sedikides and Skowronski 1991). Sherman, et al. (1990) simply state, “priming may be thought of as a procedure that increases the accessibility of some category or construct in memory” (p.405). This definition points to what is happening when an individual is exposed to something that makes some part(s) of memory more accessible. The ‘some category or construct in memory’ part concerns what exactly is being primed, while the ‘something’ the individual is exposed to, can be considered as a prime. Additionally, attention is given to how the primed content affects judgments, perceptions, and responses to a subsequent target object. Accordingly, four issues are of interest to understand priming: the process, the prime, the content being primed, and the target object (Bargh, 2002; Bargh and Chartrand, 2000; Sherman, et al. 1990).

Principally, a prime triggers some content in memory. Memory content could be a variety of different constructs, concepts, representations and the like. The primed content will affect perceptions, interpretations, and/or judgments of a prime target. In other words, the effect of the prime on prime target is mediated through activated memory content. The key assumption is that this activation-process (and effect) is unconscious, not guided by an act of will. These issues will be delineated more thoroughly in the following sections. For now,

think of the advertising context as the prime, triggering some mental content, which again affects judgment of a target brand.

### 2.1.1 The priming process

The priming process basically refers to the procedure of making content accessible in memory. The whole notion of priming rests on the assumption that this process is unconscious, without an intervening act of will (Bruner, 1957; Bargh and Chartrand, 2000). Because of unconsciousness, the recipient of the prime cannot actively counter the activation. When you are unaware of the activating process, you cannot take any active steps to prevent the activated concepts from affecting subsequent processing (Bargh 2002). The Higgins, Rholes, and Jones (1977) study was among the first to reveal how an individual's recent experiences could affect interpretation of another person's behavior. Consequently, priming as a process pertains to unconsciousness, to the *activation* of some part(s) of memory. Activation in priming terms relate predominantly to *temporary* activation (Higgins 1990). More explicitly: "With respect to momentary increases in accessibility, activation of a construct from recent or frequent "contextual priming" is capable of increasing the accessibility of a construct" (Higgins 1990:304, quotation marks in original). According to this definition only stored constructs can be activated, i.e., activation is dependent on availability.

Although the process is unconscious, several studies have shown that priming can be guided, i.e., that by controlling the stimuli that facilitate activation, one may guide interpretations given to subsequent stimuli (e.g., Herr, 1989; Higgins, et al. 1977; Higgins and King, 1981; Higgins, Bargh and Lombardi, 1985; Wyer and Srull, 1980). Thus, if a person is primed with the term "adventurous" or synonyms thereof, he or she is more likely to use this term in describing a person in a subsequent, seemingly unrelated, task (Higgins, et al. 1977). It is memory content or concept (e.g., a perception of a personality trait), which is primed, thereby increasing the likelihood that this particular memory content is applied when describing an ambiguous target.

If an advertising context addresses concepts not previously stored in consumers' memory, the context can be said to introduce, or make concepts temporarily available in short term memory. The extent to which this newly introduced concept will influence perception of subsequent stimuli more or less than already stored concepts is not known, and one might expect that both old and new concepts become accessible or interact. Given the assumption that the new concept might be equally accessible as older, stored concepts, the newly introduced

concept could serve as an interpretation frame when processing a subsequent prime target. Accordingly, one might expect congruence between advertising context and advertising content of varying levels both in the case of old stored concepts, and concepts temporarily introduced by the editorial context. In advertising contexts, the priming process incurs as the subject is reading, or in other ways is exposed to the editorial material, other advertisements or other stimuli. Following the priming logic, if one primes the word “sophisticated” by reading about sophisticated people in a magazine, that word is likely to be used when interpreting and describing a following advertisement.

As mentioned in chapter 1, the priming process can be triggered by delivering the prime subliminally, or supraliminally (Bargh, 2002; Bargh and Chartrand, 2000). In supraliminal priming, the individual is fully aware of the priming stimuli, but is not aware of some underlying pattern that serves to prime the construct (Bargh and Chartrand, 2000:259). It is more likely than not that an individual is aware of the magazine article he or she is reading prior to exposure to the advertisement, so the priming procedure could be classified as supraliminal. However, it is less obvious that the customer carefully elaborates on how the story he has read affects the way he processes the following advertisement. This lack of consciousness is the critical part of the priming procedure. For that reason awareness of the prime does not necessarily imply that you act against the prime, but it can be the case that if the influence attempt from the prime becomes too obvious, contrast-effect may occur (Herr, Sherman and Fazio, 1983; Lombardi, Higgins and Bargh, 1987; Stapel and Koomen, 1998). On the other hand, as suggested by Bargh and Chartrand (2000:264), “... in the usual case, in which one is not aware of the potential influence, bias in the direction of the primed representation occurs”. When advertisement placement is not carefully considered, it is rather evident that advertising context due to its priming capability, may be perceived as noise, leading to wrongful conclusions and perceptions of the advertisement. Even worse for the advertiser, the customer would not know that potential wrongful conclusions drawn from the advertisement could be caused by the context.

It should be noted that even in one of the most recent reviews of priming procedures, Bargh and Chartrand (2000:266) notes that it is not clear as to how different priming procedures (and processes) should be classified. Bargh and Chartrand (2000) propose a distinction based on what one aims to prime: *conceptual priming* and *mindset priming*.

Conceptual priming involves the activation of mental representations in one context, so that they exert a passive, unintended, and nonaware influence in subsequent unrelated context until their activation dissipates (Bargh and Chartrand, 2000:258).

In conceptual priming, the prime could be delivered both subliminally, and supraliminally. The crucial issue is that the priming manipulation should be done in such a way that the participant does not realize the relation between the content activation event and the later influence or use of that content in an unrelated situation. A frequently used procedure to ensure this is framing the whole experiment as two unrelated tasks (or experiments), where the recipient is primed in the first session, then asked to voluntarily participate in another experiment. As a result, the two tasks are made up to appear as different as possible, and the concern is whether the primed representation is used subsequently. It could be the case that advertising context could generate its effect through conceptual priming, it depends on *what* one wants to prime. It is less certain that the two tasks (reading the context and reading the advertisement) are sufficiently different to constitute conceptual priming, as the unrelated-tasks procedure is crucial to this category. In other words, the context is almost per definition something that occurs immediately prior to the advertisement; hence an unrelated task procedure would appear quite unrealistic in many advertising settings.

The second, and more recently conceptualized priming procedure is labeled “mindset priming” (Bargh and Chartrand, 2000:258, 265-267).

Mindset manipulations have the individual actively engage (or read about someone else so engaged) in a goal-directed type of thought in one context, to show that this mindset (Gollwitzer, 1990) – what goal to pursue in the situation – is more likely to operate in an unrelated context (Bargh and Chartrand 2000:258).

This represents the “counter-part” of passive conceptual priming, as the unrelated-tasks requirement is relaxed. Reading about other people in feature stories in print media represents something in between conceptual and mindset priming (c.f., Bargh and Chartrand, 2000:266; Chaiken, et al. 1996). The reader is not explicitly engaging in the relevant intention (of the featured person) or in this person’s act of will. In the Forbes reader example from chapter 1, the reader was exposed to executives who used high-tech tools to become more efficient. In other words, the goal of being efficient was vicariously stimulated. This goal could then be active when the Forbes reader was exposed to the subsequent PDA advertisement. As another example, consider editorial material telling a story about college students’ consumption goals or motives. This could activate the reader’s consumption goals and motives, which might operate during processing of a subsequent advertisement. The same editorial stories could also prime networks of associations that are not necessarily motivational, e.g., stereotypical images about college students or managers, own experiences as a college student, own experiences of trying to become more efficient, or particular product attributes in the case of the Forbes reader in the first example.



The lack of actively or intentionally following a primed goal in these two examples indicates that advertising context as a prime does not fit completely with mindset priming. Apparently, priming by reading about other people in e.g., newspapers or magazines falls somewhere in between conceptual and mindset priming, especially when reading functions as vicarious activation. As Bargh and Chartrand (2000:266) conclude at this very early stage of motivational priming research, we are not aware of all mechanisms in operation.

### 2.1.2 The prime

So, what is the prime? It would seem that close to every stimuli in the immediate context could represent a prime. The predominant practice has been to prime particular memory representations like “hostile” through sentence-scrambling tasks, word rehearsal, etc. (see e.g., Higgins, et al. 1977; Higgins, et al. 1985; Lombardi, et al. 1987; Bargh and Chartrand, 2000). To prime ‘hostile’, a sentence-scrambling task would typically have participants make up sentences of three out of four words, where synonyms of “hostile” would be more frequently represented than other traits. The crucial test would be if the term “hostile” were more likely to be associated with a subsequent ambiguous person than non-primed descriptors of that person (see e.g., Srull and Wyer, 1979).

Initially, priming procedures have been very precise in the sense that only particular traits (hostile) have been made accessible. The advertising context can hardly satisfy that level of accuracy. In the present research, advertising context is delineated to be the immediate editorial material surrounding a target advertisement in question in the print medium. It is therefore hard to see how advertising context in the form of a feature story in a magazine or newspaper could resemble a sentence-scrambling task, as the repetition of words would be less controlled<sup>5</sup>. However, Higgins (1990:306) argues, “... contextual priming can be conceptualized as a situational factor that creates momentary individual differences in construct accessibility”. This implies that any factor in the situational context may prime construct accessibility<sup>6</sup>. Consequently, the context surrounding an advertisement can indeed be conceptualized as a prime. Accordingly, compared to the sharply controlled studies where words are rehearsed, a feature story in a print medium is likely to be a less precise prime, and

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<sup>5</sup> Reading a feature story where the words are randomly arranged as in a scrambling task is rather unlikely to happen. Nevertheless, particular words could be primed through repeated use in headlines and boxes.

<sup>6</sup> It also indicates that the distinction between ‘priming’ as a process, and ‘prime’ as the facilitator of this process is less emphasized in Higgins (1990).

more than one type of memory content could be primed – and new concepts could be introduced and made temporarily active. It might be more precise to assume that advertising context represents a crowd of different primes, and that this is why context is perceived as noise – it opens up for (too) many interpretations and the result could be ambiguous (Empson, 1930; Hoch, 2002). Consequently, what we employ as a prime should logically be considered with respect to what it is that we aim to prime when attempting to manipulate congruence through priming.

Past research examining the contextual priming potential of advertising context has utilized different means as contextual primes (see also appendix 1). Yi (1990a) utilized advertisements to prime two particular product attributes: ease of use or versatility. Interestingly, the prime advertisements belonged to the same category as the prime target advertisement: PC's. Yi (1990b; 1993) used a magazine article in two versions, one priming fuel economy (called a cognitive prime), and the other priming safety (an affective prime). In Yi (1990b; 1993), the editorial stories were unrelated to the product category of the subsequent prime target advertisement. Coulter and Sewall (1995) utilized one magazine article as a prime, to obtain different levels of congruence with subsequent advertisements. Moorman, et al. (2002) used three different magazines, specifically they used ELLE focusing on lifestyle, *ELLE Wonen*<sup>7</sup> focusing on interior decoration, and Santé focusing on health. This represents a quite different approach than the Yi studies in the sense that their basic assumption was that content profile of the magazines, not particular content within the magazine serves as primes. Finally, De Pelsmacker, et al. (2002) utilized three mock magazines, each 10 pages being warm, humorous, or rational. A few other studies have utilized magazines as context in order to induce involvement (e.g., Coulter and Sewall, 1995; Norris and Coleman, 1992), and mood (Howard and Barry 1994). Several additional approaches can be identified in TV-program – commercial applications, but as the focus of the current research is on the print media, they will not be discussed further (see e.g., Aylesworth and MacKenzie, 1998; Broach, et al. 1995; Coulter, 1998, Goldberg and Gorn, 1987; Horn and McEwen, 1977; Lord and Burnkrant, 1993; Kamins, Marks, and Skinner, 1991; Mundorf, Zillmann, and Drew, 1991; Murry, et al. 1992; Shrum 1999). The vividness of commercials, and the combination of both audio and visual impressions in both TV programs and commercials might imply too many different mechanisms than the one(s) appropriate for the current research.

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<sup>7</sup> ELLE Wonen is a Dutch name for the interior magazine version of ELLE

Consequently, past research shows varied practice when it comes to selecting the particular editorial context to use as primes. So even if the context of advertisements has been shown to function as primes, which particular memory content they have been priming is more diverse.

### 2.1.3 The content being primed

We basically prime constructs, concepts, or representations in memory, but they may have rather different content (Bargh and Chartrand, 2000; Higgins, 1990; 1996). The acknowledgment of this fact is essential. It illustrates that instead of one chain or links from prime, via mental content, to prime target, there could be as many chains between the prime and the prime target as there are types of primed content. As a logical extension, it is not likely that all types of primed contents affect the prime target in question through the same mechanisms.

Segal and Cofer (1960) showed that exposing participants to lists of words increased the probability that those particular words were used in a subsequent free-association task. These early sentence-scrambling tasks primed semantic representations by using words as primes (see also Higgins, et al. 1977; Srull and Wyer, 1979). Subsequent research focused on perception and impression formation even more (e.g., Srull and Wyer, 1980). This tradition is more passive activation oriented where the recipient does not actively pursue the relevant representation in question, and refers to conceptual priming. Gollwitzer, Heckhausen, and Steller (1990) primed mindsets, and Chaiken, et al. (1996) primed impression vs. accuracy motives, showing that motivational memory concepts can be primed in addition to perceptual representations. Bargh and Chartrand (2000:265) conclude:

It is noteworthy that the same priming methods – such as the scrambled sentence task and subliminal prime presentation – produce motivational and behavioral effects, as well as perceptual effects. The inescapable conclusion from this fact is that in a given experiment, a priming manipulation simultaneously produces all of these various effects.

In an advertising setting then, one might very well prime needs, motives, product categories, and behavior. Still, one should not mix the primed content, and the prime target. A primed goal might affect how a customer attends to an advertisement (the prime target). In other words, when priming consumption goals, subsequent ads could be interpreted with these goals in mind. Goal primes could be delivered in third person, meaning that the participants are primed with other people's goals by reading stories or about these people (vicarious experience of motives and goals). In that sense, the goals of experimental participants are not necessarily triggered in their motivational sense or capacity, rather they are made temporarily

more accessible. As an illustrative example, consider Chaiken et al. (1996) who primed impression-management and accuracy goals by having participants read different scenarios. This would resemble having participants read a feature story in a magazine or newspaper that primes either functional or experiential needs, or goals of consumption (Park, et al. 1986; Woods, 1960).

The focus for primes in past studies utilizing the editorial context of print advertisements has varied, and it is not always clearly defined what has been primed: memory concepts or attributes in advertisements. Yi (1990a) attempted to prime two different product category concepts: PC ease of use, and PC versatility. The question was whether these concepts would be used in open-ended descriptions of a product (PC) that followed the prime manipulation. Yi (1990b; 1993) primed the concepts of product safety and fuel economy (what he labeled cognitive priming), and affective state (positive or negative). Coulter and Sewall (1995) adopted the approach of Yi (1990a, 1993) using a similar story:

The cognitive priming article utilized in experiment 1 involved a discussion of the importance of energy conservation amid dwindling global natural and environmental resources. It was assumed that this topic would be positively associated with fuel efficiency (the focal attribute of Ad 1), negatively associated with the comfort/roominess attribute of ad 2 (i.e., due to the increased gas consumption inherent in operating a large luxury automobile), and unassociated with driving pleasure (Coulter and Sewall 1995:179)

This quote shows that the aim was to prime one particular attribute, which should be differentially associated with the focal attributes of different subsequent advertisements. In their second experiment, they utilized a warm, humorous article regarding child rearing to manipulate affective consistency between prime and advertisement, i.e., they tried to prime warm emotions (e.g., happiness). Moorman, et al. (2002) did not state explicitly what memory content they were priming, but as they sought to manipulate thematic congruence, it seems logical that they tried to prime the concepts related to lifestyle, interior decoration, and health. De Pelsmacker, et al. (2002) could be assumed to prime warmth, humor, and what they labeled “rational” although they did not state if this is the explicit memory content aimed for, as their goal was to manipulate context type – ad type similarity. Finally, Iversen (2003) manipulated country stereotypes studying the effects of these primed stereotypes on brand personality associations.

These few studies show that the foci of primes have been diverse, ranging from product category attributes, via affect, to country stereotypes. Their specificity, i.e., the precision of the primes varies substantially, from “versatility” (Yi, 1990a) to more abstract

notions of positive and negative affect, and warm emotions (Coulter and Sewall, 1995; Yi 1990b; 1993).

In the current research, the editorial context consisted of stories of students' consumption behavior, seeking to trigger either functional consumption concepts, or experiential consumption concepts (Keller, 1993; Park, et al. 1986; Woods, 1960). These would be logical counterparts for different brand concepts suggested by e.g., Aaker (1996), Keller (1993; 2003), Park, et al. (1986), and Woods (1960), thereby enabling manipulation of contextual prime – target advertisement content congruence.

#### 2.1.4 Prime target: the stimulus following the prime

Primes serve to affect perceptions and judgments of subsequent stimuli (or objects) as shown in the brief presentation above. It could be easy to confuse the prime and the subsequent object. The advertisement embedded in an editorial context would represent the prime target in the current research, similar to Yi (1990a,b; 1993), Moorman, et al. (2002), De Pelsmacker, et al. (2002), Norris and Colman (1992), Coulter and Sewall (1995), and Howard and Barry (1994).

Following the traditional priming literature, prime-driven perceptions are most likely to appear when the target stimulus is ambiguous (Bargh and Chartrand, 2000). However, exactly how ambiguous a target stimulus would have to be is not clear. The impression left from Yi's (1990a,b; 1993) studies of contextual priming in advertising, is that the advertisement following a prime need to be ambiguous for priming effects to occur. With an ambiguous prime target, different primes would have equal activation potential, and should facilitate priming equally well – given that congruence of some kind between prime and prime target is irrelevant for the studies. On the other hand, when the purpose of the study is to examine effects of congruence between context and advertisement content, there should be less reason to require ambiguous prime targets. On the contrary, it should be logical to manipulate the prime target in order to obtain varying degrees of congruence or match. Consequently, other aspects of the prime target might be more interesting depending on the purpose of study, as evident from previous studies.

De Pelsmacker, et al. (2002) investigated context/ad similarity<sup>8</sup>, and manipulated this by crossing warm, humorous, and/or rational stories with warm, humorous, and/or rational advertisements. Moorman, et al. (2002) followed a similar strategy, and chose advertisements

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<sup>8</sup> Similarity in their terms has the same meaning as congruence in the present studies.

as prime targets to be vary in congruence with the profile of the magazines in which they were embedded (not congruence between specific content and advertisements). Different from other studies, Moorman, et al. (2002) used real advertisements for known brands (Alessi, Guhl, and Cartoon). In Yi's (1990a,b, 1993) work, only one advertisement was utilized, and although not explicitly addressed, his manipulations entailed conditions with varying degrees of congruence. Coulter and Sewall (1995) used four different advertisements as prime targets to vary congruence. These advertisements varied in focus, text-picture combinations etc.

The primary concern in the current research is ability to detect processing differences, so manipulation of the prime target in the current research followed the tradition in the persuasion literature, i.e., the manipulation of the quality of the arguments presented in the message representing the prime target (see e.g., Petty, et al. 1976; Petty and Cacioppo, 1986). Specifically, the focus of the advertisement is held constant, but the cogency or quality of the arguments presented in the advertisement is varied. The basic assumption is that the more recipients of advertisements elaborate on the content of the advertisement, the stronger the sensitivity to the cogency of the brand's claims should become (Petty and Cacioppo 1986, Petty and Wegener 1999). This is purely a methodological tool utilized to reveal the process that gives rise to the attitude.

None of the studies examining the effect of editorial contextual primes on judgments of advertisements and/or advertised brands have included manipulations of the quality of the arguments in advertisements used as prime targets. Consequently, we cannot be sure what kind of elaborative process that might have been triggered by previous studies varying the congruence between the prime and the prime target. A supplement to the contextual priming studies cited, can be found in mood-induction studies. Mood-induction is somewhat different when it comes to explanations for effects of context-induced mood – advertisement congruence, yet the studies by Howard and Barry (1994) and Batra and Stayman (1990) provide some evidence that varying the argument quality of target advertisements do increase understanding of elaborative processes facilitated by different degrees of congruence. Accordingly, the current research departs from the traditional priming literature in the sense that less emphasis is given to prime-target ambiguity, and the argument quality manipulation of the prime target is introduced to better detect elaborative differences that might arise from different degrees of contextual prime – prime target congruence.

### 2.1.5 How does priming work?

A prime can be administered either subliminally, or supraliminally (Bargh and Chartrand, 2000). With subliminal primes, the individual has no chance of controlling the influence. With supraliminal primes, like say advertising context, the consumer is aware of the prime, but most probably not of its influence. Most external, environmental influences involve stimuli that are in plain view, but somehow we frequently don't realize that the influence is taking place (e.g., Wilson and Brekke, 1994), and we might also be overconfident in our ability to control the way we are influenced (Bargh, 1999). If consumers should judge all incoming stimuli while consciously assessing how those judgments are affected by preceding stimuli, they would have little else to do – or rather: it would be practically impossible. As a result, the default could very well be that consumers are aware of primes, but not how they influence their judgments (Bargh, 2002:283).

However, the fact that there is an effect does not necessarily imply knowledge about why this effect occurs. At least two factors play critical roles in the priming process. The first is *accessibility* (e.g., Bargh and Chartrand, 2000; Higgins et al. 1977; Higgins and King, 1981; Higgins, 1996; Srull and Wyer, 1980). Accessibility should be distinguished from *availability*, which refers to whether or not a construct is stored in memory (Higgins and King, 1981:71). Hence, a construct might be available, but not accessible. When priming some aspect or construct, accessibility can be defined in terms of “... the readiness with which a stored construct is utilized in information processing” (Higgins and King 1981:71). However, this definition mixes availability and use, and a more precise definition of accessibility proposed by Higgins (1996) serves to illustrate this point: “Accessibility can be defined as *activation potential of available knowledge*” (p.134, italics in original). Highly accessible content has a high potential for activation. Hence, priming can activate memory content, but does not guarantee utilization of accessible content.

In Sedikides and Skowronski's (1991) “Law of Cognitive Structure Activation” one will find predominantly the same assumptions as the ones presented above. Sedikides and Skowronski do however extend the theory's applicability to domains beyond those discussed in most of priming literature. Specifically, they argue:

When a stimulus is ambiguous enough to be encodable as an instance of multiple cognitive structures, the stimulus will be most likely encoded as an instance of that cognitive structure that is the most activated in memory, and most semantically similar to the stimulus. This encoding will, in turn, affect structure-relevant judgmental and behavioral processes (Sedikides and Skowronski 1991:170)

This definition explicates the central role of semantic similarity, which can be thought of as an instance where the advertising context and the advertisement share similar (although not necessarily identical) content. It also points to the possibility that not only a particular attribute might be activated by a prime, but also that the network of knowledge (i.e., cognitive structure) associated with that attribute will become more accessible. The semantic similarity notion of the law of cognitive structure activation, and the notion of applicability in the priming literature are consistent.

It should be evident from both the priming literature, and the law of cognitive structure activation, that different types of memory content might be made accessible through priming. However, as pointed out by Higgins (1996), accessibility does not explain or account for all priming effects. If memory content is supposed to affect subsequent processes, it cannot merely be accessible; it should also be *applicable*. Higgins and Chaires (1980), and Higgins (1996) describe a primed construct as being applicable to a stimulus if there is sufficient match between the features of the (mental) construct, and the features of the stimulus. Ostensibly, this would be true for both the prime-stimulus, and the target-stimulus. Prime-stimulus applicability would indicate that only one (or a few) construct(s) is (are) applicable to the prime. A prime description is vague if no construct has more than weak applicability to it (Higgins 1996). Of course, this puts strong demands on the advertising context if it is supposed to work effectively as a prime, or if congruence is assumed to occur.

Consequently, the most straightforward answer to ‘how does priming work’ is that priming works through two critical components. First, it makes memory content accessible. Second, for accessible content to exert any effect, it has to be applicable to the prime target.

Bargh and Chartrand (2000) argue that a prime might produce behavioral, motivational, and perceptual effects. In other words, a prime might facilitate choice (a behavior, e.g., Sherman, et al. 1990), trigger a motive (Chaiken, et al. 1996), prompt different mindsets (e.g., Gollwitzer, et al. 1990), or perceptions and stereotypes (e.g., Higgins, et al. 1977; Higgins and King, 1981; Iversen, 2003). The explanation of why priming works would then have to be related to what is being primed. Priming has by itself no particular explanatory mechanism for priming effects besides the assumption that what is made accessible and is applicable is then more likely used in subsequent processing. As reviewed earlier in this manuscript in section 2.1.3, editorial context has been utilized to prime a variety of memory concepts, or chunks of memory networks (see e.g., Howard and Barry, 1994).

The link from prime to content needs little explanation in addition to that offered by the accessibility – applicability discussion. It is however evident that a host of different types



of memory representations can be primed based on different primes and priming procedures (i.e., conceptual vs. mindset priming). Thus, the challenge in predicting outcomes of priming becomes one of disentangling the effects of different types of primed content on the properties of the prime target in question. Rather than asking the question “how does a contextual prime affect target perceptions?” one might ask, “How does a primed stereotype affect target perceptions?” (c.f., Iversen, 2003) or “how does a primed product attribute affect target perceptions?” (e.g., Yi, 1990a,b; 1993).

The main interest in the current research is the extent to which contextual priming affects elaboration of the prime target. Specifically, the question is how different levels of congruence between the content of the advertising context and content of embedded advertisements affect elaboration and brand attitudes. In this respect, attention is directed towards the nature and content of elaboration, and the resulting judgments of the target (i.e., attitudinal response to the target). The key facilitators (to be discussed more extensively later) of elaboration are the recipient’s level of *motivation* and *ability* to elaborate on a communicative message, in this research the target advertisement. Interestingly, of the studies reviewed on the effect of editorial context on judgments of embedded advertisements, brand attitudes have not been the dependent variable of interest in most studies. Notable exceptions are studies by Yi (1990b; 1993). These studies show that cognitive priming (i.e., priming product attributes) affected brand attitudes. Moorman, et al. (2002) studied effects of congruence on attitudes toward the advertisements, not the brands, the same was the case for De Pelsmacker, et al. (2002). Coulter and Sewall (1995) results are mixed, and equivocal when it comes to effects of congruence on brand attitudes. None of the studies attempted to test the extent to which contextual primes affected elaborative processes leading to these attitudes.

## **2.2 Summing up: advertising context in priming terms**

The preceding discussion has shown that the effects of advertising context can be addressed through the notion of priming, or more precisely, that the effect of congruence between advertising context and advertising content can be addressed through priming.

First, priming as a procedure and process is concerned with “the mind in the middle”, i.e., how cognitive concepts and processes mediate between environmental events and psychological reactions to them. In particular, the assumption under priming is that recipients of the primes may or may not be aware of the prime, but not aware of the way the prime affects subsequent processing. It appears logical that the printed material (e.g., editorial

content, other advertisements) can be analyzed in priming terms. Consumers are practically unable or unwilling to consciously assess how all other stimuli preceding a target advertisement affect their processing of that particular advertisement.

Second, any stimuli might in principle serve as a prime. The advertising context may indeed entail words, stories, pictures etc. fully capable of making mental representations relatively more accessible. The issue is not if consumers are primed, but rather how they are primed, and what the advertising context primes – both old previously stored concepts, and new concepts temporarily introduced by the prime. Depending on the extent to which the context serves as conceptual priming or mindset priming, we might observe different effects. Apparently, particular perceptions, motives, goals and behaviors can all be primed – the importance resides in the recipient’s level of awareness of the prime’s influence. The challenge then becomes one of proactively using the advertising context to obtain wanted effects. Otherwise, context will continue to be noise.

Third, advertising context might entail a host of different contents, so the question “what is primed” becomes rather indefinite. It seems crucial to be cautious with the level of ambiguity in both prime and target advertisement to obtain predictable effects. Otherwise the prime may render so many possible interpretations open (or more specifically: so many representations activated), and consequences for advertisement processing becomes less predictable. It might also be the case that *inseparability* of target advertisement and prime becomes more problematic than separability. The review also showed that previous studies of contextual priming of print advertisements have had diverse foci for their primes.

Fourth, the targets following the prime can also be ambiguous at varying levels. The priming literature seems to suggest that main effects of primes are more likely when the target is ambiguous. However, in advertising terms, the question is more oriented to the other part of the equation because advertisers normally would like their advertisement to be perceived, processed, and judged in only one or a few of the potential ways possible. Some of the previous studies have assessed the effects of contextual prime – advertisement content congruence, but utilized attitude toward the advertisement, *not* attitude toward the brand as their dependent variable, leaving the door open for congruence effects on brand attitudes. The review also revealed that no attempts have been made to vary the quality of brand claims in the advertisements, leaving the elaborative capacity of congruence between advertising context and advertising content unknown in these studies.

Fifth, explanatory mechanisms in the priming literature are primarily oriented towards the notions *accessibility*, and *applicability*. Specifically, the assumption is that activated

content will drive perceptions and judgments of subsequent stimuli as far as the activated memory content is applicable to the prime target. Memory concepts might vary in the extent to which they are more chronically accessible, or temporarily accessible. It is likely that editorial context primarily can serve as a means to prime memory concepts to become temporarily accessible. Explanations of elaborative effects of the accessibility and applicability notions have not been addressed in the priming literature.

Having reviewed the priming literature with specific emphasis on how editorial context may serve as contextual primes of print-advertisement judgments, it is clear that the elaborative consequences of this type of priming need to be addressed from perspective of attitude and persuasion research. The next chapter focuses on principles of persuasion, and how advertising context as contextual primes might affect elaboration and attitudinal responses.

### **3. ELABORATION AND PERSUASION**

The previous chapter identified editorial context as potentially significant for perceptions and judgments given to subsequent (embedded) advertisements. The judgment of primary interest in the current research is the attitudinal response given to the advertised brand (brand attitude), and the strength of this attitude. To illustrate: recall the Forbes reader from the example in chapter 1. The primary interest is the attitudinal response given to the advertised PDA, *and* the extent to which this brand attitude would be different depending on the stories he read prior to ad-exposure. The term “attitudinal response” implies more than the attitude per se, it also includes properties of the process leading up to the attitude, and attitude-strength related consequences. More precisely, the current research is concerned with the following: first, the nature and extent of advertisement elaboration, second, the facilitators of elaboration, third, how variables in the persuasion context affect elaboration, and finally, strength-properties of the brand attitude. The roles advertising context in these different issues are also essential.

Contemporary theories of persuasion have helped to organize, categorize and understand *processes* underlying attitude changes in a variety of settings (see e.g., Chaiken and Trope, 1999; Eagly and Chaiken, 1993; Petty and Wegener, 1998a; 1999). Most prominent among the persuasion theories are the dual process models HSM (the Heuristic Systematic Model: Chaiken, 1980) and the ELM (the Elaboration Likelihood Model: Petty and Cacioppo, 1984; 1986). In the last decade(s), these models have guided research in the area of attitude change, and within marketing: how advertising works (Vakratsas and Ambler, 1999; Meyers-Levy and Malaviya, 1999).

#### **3.1 Message processing: The dual processes principle**

A core assumption in the persuasion literature is that attitudes might arise from different processes, and based on the nature of these processes, attitudes might vary in strength (Haugtvedt and Petty, 1992; Haugtvedt and Wegener, 1994; Haugtvedt, et al. 1994; Haugtvedt and Priester, 1997; Petty, et al. 1995). As discussed in the previous chapter, some of priming research has shown that congruence between prime and advertisement might facilitate positive attitudinal responses. However, the extent to which varying levels of congruence prompt more or less message elaboration or processing is unknown. The past priming studies have not used manipulations necessary to detect potential processing differences associated with different contextual primes. The current research sought to

investigate the capacity prime-target congruence has to trigger different levels of elaboration in the persuasion process.

Both the ELM and the HSM suggest that the same brand attitude can result from very different processes, as implied by the label “dual process theories”. Consider an advertisement for a PDA with the typical “picture and bullet-point information” format. Typically, the ad lists features like size of working memory, storage space, speed of the processor, screen resolution, colors, compatibility with other hard- or software etc. We would have one picture, and a number of sales arguments or product attributes presented. First, in some situations, or for some kinds of individuals, attitudes may be established and/or changed in a positive direction as the consumer reflects on the content and quality of message arguments. A consumer, who is knowledgeable about PDAs, would be more likely to carefully consider all available information before reaching a conclusion (i.e. establishing a brand attitude). The consumer might infer that based on size of working memory, storage space, compatibility, and connectivity, this is a state of the art product, suitable for his needs. This conclusion is inferred, not explicitly stated in the advertisement. When this type of inference occurs, the consumer has elaborated on available information. The preponderance of positive thoughts in this thoughtful process would serve as a basis for a positive attitude. In other words, the consumer is elaborating on the available brand specific information.

Second, in other situations, or for other kinds of consumers, an attitude may arise or change due to simple inferences or positive associations. Consider the PDA novice<sup>9</sup> looking at the PDA advertisement described earlier. He might just think about one or two of the pieces of information, the picture, the design of the ad itself, and might not be able to infer implications from the presented information to the same extent as the expert. He is likely to generate fewer thoughts about the advertised brand than the expert. In this case his brand attitude is the result of a less elaborative process, it might be a simple inference like “it has five complicated things speaking for it, it must be good”. Hence, two consumers might reach the same conclusion in terms of attitude extremity, but if they follow different elaborative processes, the strength of their respective attitudes may be different.

The thoughtful process described above is considered as a central route process (ELM) or a systematic process (HSM), and the latter as a peripheral route process (ELM) or a

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<sup>9</sup> In this example, level of expertise is used as a variable affecting the elaboration likelihood. That is, the expert is more likely than the novice to have motivation and/or ability to elaborate. In the current research, we ask if the contextual prime could affect elaboration likelihood in similar ways.

heuristic process (HSM). Although these labels give the impression that these two processes are uniquely separated, elaboration can vary along a continuum from minimal to extensive (Petty and Wegener, 1999). The important issue is that the nature of elaboration along the continuum can be both qualitatively and quantitatively different. The term “elaboration” is used to suggest that people add something *of their own* to the specific information provided. That is, when elaborating on an advertisement, they go beyond the mere verbatim encoding (or learning) of the information provided (Petty and Wegener, 1999:46). Thus, there is a *quantitative* difference implying that the type of thoughts given to object relevant information can be the same along the elaboration continuum, but that the *amount* of cognitive activity varies. The high-elaboration consumer might consider all pieces of information, and make several implications from each piece of information, whereas the low-elaboration consumer considers all pieces, but generates few thoughts (e.g., Petty and Cacioppo, 1986). The effect is a relative one, where the amount of thoughts is relatively higher in high-elaboration than the low-elaboration condition.

In addition, there could be a *qualitative* difference in elaborative processes referring to the assumption that low-elaboration attitude change can be based on processes that are substantially different from high-elaboration processes (Petty and Wegener 1998a: 331-342; Petty and Wegener, 1999:46). Importantly, it is not only the number of thoughts, but also the nature of the processes yielding these thoughts that matter. Message learning/reception processes (e.g., Hovland, 1953; McGuire, 1964; 1968), cognitive responses (e.g., Brock, 1967; Greenwald, 1968), expectancy-value models (e.g., Fishbein and Ajzen, 1975), and to some extent, cognitive dissonance (e.g., Festinger, 1957) are classified as high-elaboration processes. Common to all of these are relatively high levels of elaboration leading toward a judgment. On the other hand, classical conditioning (e.g., Staats and Staats, 1958; Gresham and Shimp, 1985), attribution theory/self-perception theory (e.g., Bem, 1972), and mere-exposure effects (Bornstein 1989; Zajonc 1968) are classified as low-elaboration processes. So, whereas the quantitative distinction relates to amount of elaboration leading to the judgment, the qualitative distinction relates to differences in processes leading toward the judgment.

Persuasive messages presented in the form of advertisements can be subject to varying degrees of elaboration. There could be two polar situations, a lower-elaboration situation, where attitudes are based on peripheral processing, and a higher-elaboration situation where attitudes are based on more thorough processing. However, as elaboration is a matter of amount and type, the distinction is relative rather than absolute. In the current research, it was

crucial to investigate the extent to which varying levels of congruity between the advertisement and the advertising-context decreases or increases elaboration.

Continuing with the Forbes reader example from chapter 1, two different situations can be envisioned. First, he might read the story describing company executives' use of information technology to be more efficient, and then be exposed to the PDA advertisement stressing functional, efficiency oriented product attributes. This could represent a situation with high congruity between editorial context and advertisement content. Second, he might read about the same executives, but now the story could cover their culinary interests. In this case, the congruence between editorial context and advertisement content could be said to be lower due to fewer shared or overlapping properties.

It is not sufficient to say that due to the overlapping properties of the prime and advertisement in the first, congruent situation, the attitudinal response should be more positive than in the less-overlapping, incongruent second situation<sup>10</sup>. It could be the case that in the congruent situation, the increased accessibility and applicability of memory content renders the reader more skeptical or critical to (or able to assess) the merits of the arguments in the advertisement, thereby producing a less favorable brand attitude (if the arguments are perceived to be weak). In the absence of this prime-ad congruence (situation two), the same level of skepticism or processing ability might not be evoked, and the attitude could be *more* favorable than in situation one (he might not elaborate on the merits of the presented arguments to the same extent). Thus, incongruence might in fact be superior to congruence. Yet in another scenario, one could imagine the reader in the congruent situation being able to elaborate more simply due to the perceived applicability of primed memory content, and thus reach a favorable attitudinal response based on the amount of elaboration. The reader in situation two could experience less applicability of primed memory content, and therefore produce a lower number of brand-related thoughts – resulting in a less favorable attitude. In this latter scenario, congruence-driven amount of elaboration, not necessarily merits of presented arguments, could account for the attitudinal response. Stated differently, the extent to which congruence yields positive or negative attitudinal response depends on the elaborative process, and the merits of the advertised brand. Additionally, one might experience that effects of congruence on brand attitude could be mediated through cognitive responses in a high elaboration condition, but no mediation in the low-elaboration likelihood condition.

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<sup>10</sup> That would represent a main effect of congruence.

This exemplification directs attention to the next essential part of the persuasion theories, the facilitators and inhibitors of elaboration.

### **3.2 Facilitators of elaboration**

The ELM hypothesis of an elaboration continuum comes from recognizing that it is impossible for people to elaborate extensively on all the messages (e.g., advertisements), and attitude objects (e.g., brands) they encounter daily. In order to function in life, people must sometimes act as “cognitive misers” (Taylor, 1981). Given these cognitive limitations, it is even less likely that consumers have additional capacity to consider how the advertising context affects how they elaborate. Thus, it is necessary to address under which circumstances different levels of elaboration is more or less likely to occur. According to the ELM (e.g., Petty and Cacioppo, 1986), elaboration likelihood increases as people are *motivated* to think, and are *able* to think (i.e., have the necessary skills and opportunity to engage in thought). In their review of how advertising works, Vakratsas and Ambler (1999) conclude that consumers’ motivation and ability serve as the primary filters for the amount of elaboration given to advertisements (see also MacInnis, Moorman, and Jaworski, 1991). This review did however not address if or how advertising context might affect these filters.

There are many variables capable of affecting elaboration likelihood and thereby influencing whether attitude change is likely to occur by the high- or low-elaboration process. Some of these motivational and ability variables are part of the persuasion situation (e.g., the advertising context), whereas others are part of the consumer (e.g., need for cognition; Haugtvedt, et al. 1992, category expertise as in the PDA example, etc). Some variables affect mostly the amount of information processing activity, whereas others tend to influence the direction or valence of thinking (Petty and Wegener, 1998a). One of the best-documented variables influencing a person’s motivation to elaborate is the perceived personal relevance of the message (e.g., Petty and Cacioppo, 1979; 1990; Petty, et al. 1983; Johnson and Eagly, 1989). When people perceive the personal relevance or importance of the advertisement to be high, they are more influenced by their processing of the substantive arguments in the advertisement, and less influenced by peripheral cues (see e.g., Petty, Cacioppo, and Goldman, 1981; Petty et al. 1983).

In the current research, the question is the extent to which contextual prime – target advertisement content congruence affects elaboration. Other studies have previously addressed the elaborative potency of matching messages to properties of the individual and/or the attitude object itself, its category etc. When it comes to attitudinal effects, congruence



between message content and factors like attitude functions (e.g., Lavine and Snyder, 1996; DeBono, 1987; DeBono and Packer, 1991; Snyder and DeBono, 1985; 1989<sup>11</sup>), attitude object functions (e.g., Shavitt, 1990), cognitive and affective bases of attitudes (e.g., Edwards, 1990; Edwards and von Hippel, 1995, Fabrigar and Petty, 1999), mood-profile of television programs (e.g., Aylesworth and MacKenzie, 1998), mood-profile of preceding stories (Howard and Barry, 1994), product types (Johar and Sirgy, 1991) have primarily shown that matching or congruent messages tend to produce more positive attitudes than mismatching (incongruent) messages. In the functional attitude domain the attitude function – advertisement content congruence has established itself to such extent that it has obtained the label “the functional matching hypothesis of persuasion” (see e.g., Lavine and Snyder 1996; Petty, Wheeler and Bizer, 2000). However, the explanations and results are mixed, as illustrated by Millar and Millar (1990) who found mismatching to be more effective. In an effort to resolve some inconsistencies, Petty and Wegener (1998b) suggested that matching effects on persuasion could be explained through at least three different mechanisms (see also Fabrigar and Petty, 1999; Petty, et al. 2000) based on the multiple roles of persuasion variables postulate (Petty and Cacioppo, 1986). Petty and his colleagues (Petty and Wegener, 1998b; Petty, et al. 2000) obtained congruence by matching message content, and personality traits or schemas self-monitoring and need for cognition. Wheeler (2001) also found that self-schema matching could serve to increase elaboration likelihood, so the assumption that congruence might facilitate elaboration is documented. However, the strategy to manipulate congruence in the current research is different from these previous studies.

The current research addresses an additional way of obtaining congruence to facilitate elaboration. Instead of relying on personality traits, self-schemas, or attitude object (class) characteristics (their functions, or their classes of supporting beliefs) to obtain varying degrees of congruence, the goal was to situationally manipulate congruence by means of the advertising context. Hence, the strategy reported here parallels that of situationally inducing temporal accessibility of memory concepts (old or newly introduced), and consequently temporal congruence, through priming (Higgins, 1996).

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<sup>11</sup> The personality trait self-monitoring has been used extensively as an operationalization of the value expressive attitude function. Consequently, the result is a person × target ad interaction. See e.g., Shavitt (1989, 1990), Shavitt, Lowrey, and Han (1992) for a critique of this procedure.

The notion that congruence between contextual prime and target advertisement content might affect elaboration fits into the multiple roles of persuasion variables postulate, subject for discussion in the next section.

### **3.3 Multiple roles for persuasion variables**

The multiple roles of persuasion variables postulate in the ELM states that

... variables can influence judgments (1) by serving as arguments relevant to determining the merits of an object or position, (2) by biasing the processing of attitude-relevant information (both of which are most likely when motivation and ability to scrutinize attitude-relevant information are high), (3) by serving as peripheral cue (when motivation and ability is low), and (4) by itself affecting the level of scrutiny given to attitude-relevant information (when elaboration is not constrained by other factors to be particularly high or low) (Petty and Wegener, 1998:344; see also Petty and Cacioppo, 1986:16; Petty and Wegener, 1999:48).

Continuing from the previous section, this postulate outlines four different ways in which variables in the persuasion setting might affect elaboration likelihood. At different positions along the elaboration continuum, variables are postulated to assume different roles. Several variables in the current research fit into this postulate, the prime itself, the target advertisement, and the contextual prime – target advertisement content congruence. As congruence is the main concern of this research, this will be the main focus of discussion, and be addressed first. Then, a brief discussion will be presented with respect to the roles played by the prime and the advertisement respectively. Keeping in mind that congruence is a function of context – advertisement interaction, the main effects of the context and the advertisement are of secondary interest in the current research. Also, the crucial question for the current research was one of how a variable (the congruence) by itself could affect the level of message scrutiny given to the advertisement. Hence, attention is given to role (4) in the postulate above at the present stage of research.

#### **3.3.1 Prime – target congruence as a persuasion variable**

The enhanced scrutiny explanation for effects of persuasion variables may come into play when elaboration likelihood is not constrained to be either high or low. In the setting of the current research, it was unlikely that motivation and ability to elaborate were particularly high, or constrained to be low while evaluating embedded advertisements. In moderate elaboration likelihood conditions, one might expect some elaboration to take place as a baseline (Petty and Cacioppo, 1986). The question then becomes one of whether conditions with increasing congruence between contextual prime and advertisement content facilitate elaboration in such circumstances.

According to network theory (Anderson, 1983; Bower, 1981; Bower and Cohen, 1982), memories of stimulus events can be represented as a configured web of associative ideas. The memory network that becomes available at the time of advertisement context exposure facilitates connection between previously stored knowledge (in the network) and the cognitive responses to the content of the contextual prime. In other words, the network linkages between previous mental concepts and the information present in the contextual prime are likely to be rehearsed. The likelihood of material being cued from memory is a function not only of associative linkages, but also other variables such as the recency of processing information, as hypothesized by the priming literature (e.g., Higgins and King, 1981; Higgins, 1996). If we assume that memory operates on a last-in-first-out basis principle as suggested in early priming research (e.g., Higgins, et al. 1977), it is likely that the most recently primed associations (i.e., those primed by the advertising context), should be more available and become more readily retrieved. By implication this should imply that the cognitions generated in connection with the editorial contextual prime are those ideas, thoughts, and memories that most likely are available at time of advertising exposure.

The interconnections between primed mental concept(s), and the information in the prime itself could place quite heavy burdens on the cognitive capacity of the consumer at the onset of advertising exposure. The current research suggests that this represents a condition where it is more likely than not that the advertising content with higher degree of congruence with the prime (and primed memory content) will be more readily elaborated upon. Logically then, the elaborative capacity of the prime-target ad congruence would depend on not only accessibility of mental concepts, but even more so, the applicability of the primed mental concepts. As argued by e.g., Tybout, Sternthal, and Calder (1983), elaboration is facilitated by the ease with which one can integrate or relate new and existing information, or specifically, elaboration is likely to occur when new information is related to a concept for which people have many associations stored in memory. Hence, the more applicable the primed memory content is to the advertisement, the more elaboration should be facilitated. For example, when the Forbes reader in the initial example reads about efficient organization of work-time, there is a condition where the primed information in memory interacts with the information in the prime and the content of the advertisement. As the subsequent advertisement presents an object that easily fits into this primed content, it seems logical to assume that that particular advertisement is more likely to be scrutinized. This is consistent with chunking processes in memory (e.g., Crowder, 1976), that demonstrate how categorically similar information tends

to be processed more efficiently, thus avoiding cognitive capacity limitations. If this is the case, congruence should facilitate elaboration.

This explanation predicts an interaction between congruence and e.g., the cogency of the information in the advertisement. In other words, in congruent conditions, the recipient should hold sufficient capacity to elaborate. As the advertisement content is congruent with prime content, it seems more likely than not that the arguments for the advertised brand should be more critically, or extensively elaborated upon. If congruence facilitates elaboration, sensitivity to argument cogency should increase with higher congruence between prime and target. The pattern would then be such that if arguments in the advertisement are deemed as insubstantial or specious, this should be more penalized when congruence is high, rather than low following the enhanced scrutiny explanation. In the incongruent situation, one would expect less or no sensitivity to argument strength. As argued by Petty and Cacioppo (1984:70):

According to this view, if under scrutiny the message arguments are found to be cogent and compelling, favorable thoughts will be elicited that will result in change in direction of the advocacy. If the arguments are found to be weak and specious, they will be counterargued and the message will be resisted – or boomerang (change in the opposite to that intended) may even occur.

### 3.3.2 Prime target: the advertisement as a persuasion variable

This is the persuasive message itself, and would represent the target advertisement in the current study. Message relevance is usually considered as one message property, with the dominant assumption being that how much a person cares about an issue is dependent on the extent to which the issue is relevant to some aspect of oneself (i.e., ones beliefs, possessions, values, groups, etc. cf. Bonninger, Krosnick, Berent, and Fabrigar, 1995; Petty, Cacioppo, and Haugtvedt, 1992). The baseline assumption is that the more relevant, the higher elaboration likelihood. In the current research, this property of the message is not manipulated, but its motivational property is held constant across conditions. There are, however, some other properties of the message in need of clarification.

First, in marketing applications of the ELM, one might get the impression that some pieces of information are by “always” cues, like e.g., the brand name itself, packaging, user image, country of origin, or other “non-product related attributes”. Information about product-related, or intrinsic attributes (quality, durability, weight, color, etc.) is regarded as arguments. Consequently, some marketers would assume that only information about product related attributes is processed in high-elaboration conditions, whereas information about non-product related attributes only is processed in low-elaboration conditions. This is a rather fruitless

approach, which clearly misses out on important assumptions in the ELM (Petty and Cacioppo, 1986; Petty and Wegener, 1999). Any piece of information may serve as a cue at the low end of the elaboration continuum, whereas they may serve as arguments or bias processing at the high end of the elaboration continuum. No piece of information is therefore by definition a cue *or* an argument. Hence, if the processor is motivated and able to process information, he will examine all available information to evaluate its importance for assessing the true merits of the issue. In this case, information about brand X's country of origin could very well be an argument (e.g., "Norwegian Salmon is the best there is due to low sea-water pollution"). On the other hand, with low motivation and/or ability to process information, information is more likely to be considered as cues giving direction to the evaluation in a peripheral processing manner ("Norwegian Salmon is good because I like Norway"). Consequently, the primary concern for a marketer aiming to establish strong brand attitudes in favor of his brand would be to what extent the processor is able to find information of such nature that when scrutinized, the information is perceived as sound arguments.

Another property of the advertising message is the cogency or quality of the information in the message. The argument quality manipulation is a central methodological tool in the ELM tradition, meaning that it serves the purpose of detecting the extent to which the recipient of the message is elaborating or not. Argument quality concerns the strength, compellingness, or cogency the recipient perceives the information to have when scrutinizing or elaborating on the information (Petty and Cacioppo, 1979; 1984; 1986; Petty, et al. 1976). The quality might therefore be more adequately addressed depending on the recipient's level of motivation and/or ability to process the information. In low-elaboration conditions, one would not expect the recipient to show the same level of sensitivity to argument quality as in a high-elaboration condition (e.g., Petty and Cacioppo, 1979). Therefore, in order to detect the extent of elaboration, a potential strategy is to vary the quality of arguments in the message, and analyze in which condition(s) recipients exhibit sensitivity to argument strength. The prime target (in this case the advertisement) has not been subject to this manipulation in previous contextual priming studies. In some mood-induction studies, (e.g., Batra and Stayman 1990; Howard and Barry, 1994), argument quality manipulations have been made in print advertising settings. However, as mood is not the prime focus of the current research, their results cannot be transferred directly.

In sum, one important question addressed by the current research was the extent to which the sensitivity to argument quality manipulations differed across contextual primes, or more precisely, differed as a function of prime-target congruence.

### 3.3.3 Prime: the editorial context as a persuasion variable

In persuasion terms, context refers to any factors related to the setting in which the communication is presented (Petty and Wegener, 1998a). Although not discussed as a context variable in the Petty and Wegener (1998a) review, the editorial context of advertisements would logically adhere to this category of persuasion variables. If the editorial context is supposed to exert an effect through a priming mechanism, it presupposes that the recipient is unaware of how exactly he or she is influenced by the prime in subsequent judgments (cf. Bargh and Chartrand, 2000).

From a priming perspective, it is not straightforward to determine which role under the multiple roles postulate the contextual prime might serve. In the current research, the primary interest in the contextual prime is derived from its potential to establish conditions with varying degrees of congruence with the advertisement – and as such, no particular predictions will be made about the elaborative efficiency (or inefficiency) of the prime per se.

However, some comments could be made that address key features of the prime in a persuasion setting. Chapter 2 suggested accessibility and applicability as key drivers of priming effects. Applicability of memory content on prime target seems logically tied to ability to elaborate in the sense that if a prime triggers some memory content that is easily applicable to the prime target, ability to elaborate on the prime target might be facilitated even though motivation to elaborate could be unaffected. In other words, editorial material could make memory content accessible, but if this memory content is less applicable, no effects on elaboration would be likely to occur following an ability to elaborate logic. Likewise, it could also be the case that the advertising context could cause e.g., product category associations to become more accessible, and without necessarily affecting motivation, it may nevertheless facilitate more elaborate message processing simply because elaboration then could be carried out with less effort than in the case of a non-applicable alternative editorial. Furthermore, it could be the case that advertising context (the particular prime) could trigger personal goals, which in turn might be addressed by the advertisement. In such case, prime could be said to increase the relevance of the persuasive message, and accordingly increase elaboration.

In chapter 2, a distinction was drawn between *conceptual* vs. *mindset* priming. The mindset priming procedure shares some similarity with manipulation of personal relevance by Petty et al. (1983). As mindset priming is more motivational in nature (Bargh and Chartrand, 2000; Chen, et al. 1996), motivation to elaborate could be more affected with this priming technique. On the other hand, conceptual priming involves the activation of mental

representations in one context, so that they exert a passive, unintended, and nonaware influence in subsequent unrelated context until their activation dissipates (Bargh and Chartrand, 2000:258). As also noted by Bargh and Chartrand (2000), the current state of knowledge about primes' roles as mindset primes and/or motivational primes is still rudimentary, and it is accordingly premature to categorize contextual primes (defined here as the editorial material) into either conceptual or mindset priming techniques. It is likely that depending on the content of the editorial material, different mental representations will become accessible – and conclusively, the interaction between accessible and applicable mental representations and the content of the prime target remains most crucial.

### **3.4 Summing up**

The preceding review of the persuasion literature has attempted to intertwine issues learned from the review of priming into the persuasion issues relevant to the questions in the current research.

A key assumption in the process theories of persuasion reviewed here is that equally positive (or extreme) attitudes can arise from different cognitive processes. Importantly, depending on the quality and quantity of elaboration given to a persuasive message (the advertisement), attitudes can be held with different strength.

Since an advertisement can be elaborated upon differently, this directs attention to what fosters or hinders elaboration. Two main facilitators were mentioned: the recipient's level of motivation, and ability to elaborate. A wide range of variables has been shown in previous research to affect motivation and/or ability to elaborate. Some studies have investigated the extent to which persuasive messages matching or mismatching properties of the individual and/or the attitude object affect elaboration likelihood.

The current research extends on this knowledge by examining how situationally induced congruence between advertisement content and advertising context in print media might affect elaboration (in study 1). Potential attitude strength consequences in relation to the second research question of this dissertation will be theorized and tested in the subsequent study 2. The multiple roles of variables postulate of the ELM offers a framework for the assumption that degree of congruence between the advertising context and the content of the advertisement could serve to enhance scrutiny (or elaboration likelihood). The rationale for this assumption is derived from the priming literature's notion of accessibility and applicability. Specifically, the contextual prime will make some memory content accessible,

and dependent on the applicability of this memory content to the prime target, elaboration likelihood can increase.

The prime target is represented by the advertisement, or more precisely the content of the advertisement. In the ELM, the quality of this content is subject to manipulation as a methodological tool, the assumption being that sensitivity to the quality of message arguments should increase with increasing elaboration likelihood. The prime in the form of editorial material has to enable the occurrence of conditions with varying degrees of congruence between editorial story and advertising content. In other words, different primes will make the respective primed memory content equally accessible, but only one condition entails the occurrence of accessible memory content applicable to the content of the advertisement (i.e., high congruence). Study 1 is devoted to testing these first assumptions.



## **4. STUDY 1: CONTEXTUAL PRIMING AND ELABORATION**

The first research question in this dissertation asked to what extent different levels of congruence between advertising context and the content of the advertisement had implications for the level of elaboration exhibited by consumers. This somewhat exploratory question was the focus of study 1, seeking to lay foundations for studying the phenomenon.

This chapter is organized as follows. First, we specify the hypotheses for study 1 based on the previous literature review. Second, we describe the methodology of study 1, finally, we present results from the empirical tests of the hypotheses.

### **4.1. Hypotheses**

The purpose of study 1 is to provide initial evidence that contextual prime – target advertisement congruence might affect the nature of elaboration given to claims in the advertisement, as identified through different empirical patterns. Specifically, if congruence does affect message elaboration, we might expect that at different levels of congruence:

- a) brand attitude extremity differ, qualified by sensitivity to argument quality,
- b) content of cognitive responses will differ, qualified by sensitivity to argument quality,
- c) correlation between cognitive responses and brand attitude will differ, and
- d) correlation between brand attitude and purchase intention will differ.

#### **4.1.1. Congruence and brand attitude**

Congruence can be conceived of as an instance where the content of the editorial material primes memory concepts applicable to the content of claims in the persuasive message. Network theory (Anderson, 1983; Bower, 1981; Bower and Cohen, 1982), suggests that memories of stimulus events can be represented as a configured web of associative ideas. Exposure to editorial material prior to advertising exposure represents such a stimulus event. In this case, the network linkages between previous memory concepts and the information present in the editorial material are likely to be rehearsed. This should imply that a predominant part of the recipient's information handling capacity is occupied with concepts primed by the editorial material. Early priming research would suggest that memory operates on a last-in-first-out basis principle as suggested in early priming research (e.g., Higgins, et al. 1977). This should imply that the cognitions generated in connection with the editorial contextual prime are those ideas, thoughts, and memories that most likely are available at time of advertising exposure.

Now, does this increase or decrease elaboration likelihood of the subsequent claims in a brand's advertisement? Potential increase or decrease depends on the extent to which congruence will ease the information processing. In conditions with higher congruence, the primed memory concepts are more readily applicable to the prime target (Higgins, 1996). In conditions with lower congruence, primed memory concepts are equally accessible, but not as applicable to information from the prime target. In conditions with lower congruence, one could therefore assume that the lack of congruence might confuse the recipient, or otherwise place burdens on his capacity to elaborate on prime target information. One potential result could be that the recipient simply disregards the information from the prime target, or in fact draw wrongful implications from the presented information because his interpretive frame provides skewed directions for processing.

In conditions with higher degrees of congruence, it is more likely than not that the advertising content will be more readily elaborated upon. The interpretive frame provided by high congruence provides direction to information processing, or more precisely, it is more likely that the claims in will be accepted as arguments when congruence is high rather than low. This follows from the elaboration likelihood assumption that a recipient will scrutinize information in order to learn the true merits whenever he has the motivation and/or ability to elaborate (Petty and Cacioppo, 1986; Petty and Wegener, 1999). The argument here is not that the recipient necessarily feels more strongly motivated in the high vs. the low congruence condition, but rather that the readily applicable memory concepts eases the processing of subsequent information.

Tybout, et al. (1983) argue that elaboration is facilitated by the ease with which one can integrate or relate new and existing information, or specifically, elaboration is likely to occur when new information is related to a concept for which people have many associations stored in memory. In the case of contextual priming, it could also be the case that there were no memory concepts stored prior to the priming event, but the prime could nevertheless leave newly introduced concepts prominent in short-term memory, thereby providing a foundation for congruence. Additionally, memory can work through so-called "chunking processes" (e.g., Crowder, 1976), meaning that categorically similar information tends to be processed more efficiently, thus avoiding cognitive capacity limitations. In other words, with higher levels of congruence, prime target information should be processed more efficiently.

If congruence facilitates elaboration, it is likely that the recipient should be more attentive to the quality of the arguments presented in the prime target (Petty and Cacioppo, 1986). Returning to the Forbes reader in the introduction, if congruence facilitates elaboration,

he should be more attentive to the quality of the arguments presented for the PDA if he first read the story about executives becoming more efficient when using electronic aids, than if he read a story about the same executives' culinary interests. This prediction results from the assumption that with increasing levels of elaboration likelihood, message arguments become subject to more extensive scrutiny (Petty and Cacioppo, 1986; Petty and Wegener, 1999). In higher congruence conditions, the overlap between primed concepts and advertisement claims provides a condition where this scrutiny could be less demanding, or in other words, he holds more sufficient capacity to elaborate than in the low congruence condition.

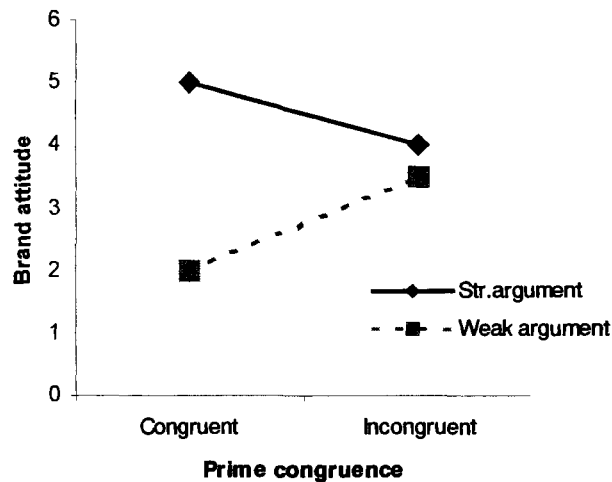
This explanation predicts an interaction between congruence and the cogency of the information in the advertisement. It seems more likely than not that the subsequent arguments presented for the advertised brand should be more critically, or extensively elaborated upon in congruent compared to incongruent conditions. If congruence facilitates elaboration, sensitivity to argument cogency should increase with higher congruence between prime and target. If this prediction holds, attitudes of congruently primed participants would be more positive the stronger the message arguments and vice versa for weaker arguments. If incongruence is a weaker facilitator (or inhibitor) of elaboration, one should expect the attitudes of incongruently primed participants to be significantly less sensitive to the quality of message arguments.

Previous research within priming or persuasion has not combined congruence and argument quality manipulations, at least not with the temporary congruence manipulation pursued in the current research. Studies by Petty and Wegener (1998b), also reported by Petty, et al. (2000), utilized self-monitoring (e.g., Snyder, 1979; Snyder and DeBono 1985) and need for cognition in combination with value-oriented vs. utilitarian advertisements to manipulate congruence, and found congruence to increase elaboration likelihood. Such a manipulation cannot be said to entail the same properties of temporal activation as the one obtained through contextual priming, but some of the basic logic transfers to the current studies, and is supportive of the basic prediction offered here. Specifically, the first hypothesis of the current research is:

*H1: There will be an interaction between advertising context and advertising content so that brand attitude will be more positive in the high congruence strong argument quality condition than in the high congruence weak argument quality condition. Smaller differences will be observed in incongruent strong argument quality condition compared to the incongruent weak argument quality condition.*

The hypothesized interaction translates into the expected pattern shown in figure 1, in line with predictions from Petty and Cacioppo (1986:34):

Figure 1  
Example of prime congruence x argument strength interaction



This figure shows that sensitivity to argument strength in the congruent prime condition yields a situation where weak arguments are penalized compared to the incongruent prime condition, and strong arguments are rewarded compared to the incongruent prime condition. Thus, if obtained, this pattern would indicate that higher levels of elaboration have been taking place in the congruent prime condition compared to the incongruent prime condition. There is no apparent reason to expect the attitudinal responses in the incongruent prime condition to be reversed compared to the congruent prime condition, hence we do not expect a crossover interaction. Instead, the incongruently primed participants should show insensitivity to the argument quality manipulation, and score close to equal if prime congruence facilitates elaboration.

#### 4.1.2 Congruence and cognitive responses to the brand

Hypothesis 1 suggested that the attitudinal response would differ as a result of interaction between prime congruence and argument quality. Additional evidence that contextual prime content – ad content congruence affects elaboration likelihood should be found in the content of the cognitive responses to the advertisements (Cacioppo and Petty, 1981; Petty, et al. 1981; Petty and Cacioppo 1986).

Brock (1967) and Greenwald (1968) suggested that one way of assessing extent and content of elaboration in persuasion situations was to have experimental participants listing their thoughts either during or after exposure of the persuasive message. The basic assumption is that if a variable increases elaboration likelihood (e.g., need for cognition, personal relevance, or in the current research, prime-target congruence), this might lead to an increase in total number of thoughts about the issue or message and vice versa. The cognitive responses need not only be recollection of message arguments, but also (preferably) inferences made based on message arguments, meaning that the respondents might add something on their own based on the arguments (e.g., Petty and Cacioppo, 1986; Petty and Wegener, 1999). These thoughts could then be coded into categories like high-issue relevance or low-issue relevance. Another option is that enhanced message scrutiny could increase cognitive responses consistent with the quality of message arguments, but decrease cognitive responses that are inconsistent with their quality (Petty, et al. 1995). Accordingly, not only the total number, but also the profile of cognitive responses might provide information about the elaborative process taking place. Consider a message with strong arguments, then favorable cognitive responses should increase, and unfavorable responses should decrease as message scrutiny increased (e.g., higher levels of prime-target congruence). The ratio will change, but the total amount of thoughts might remain the same. Specifically, the relative profile of favorable and unfavorable issue-relevant thoughts listed might be used as to index of elaboration even though there are no differences in the absolute number of thoughts listed (Petty and Cacioppo, 1986:39). It might also be the case that the total number of thoughts will be equal across different conditions of elaboration likelihood. However, in the low-processing conditions, the profile of thoughts should be unaffected by manipulations of argument quality, whereas in the high-processing conditions, the opposite would be true. The more the profile of thoughts reflects the quality of the arguments presented, the more likely it is that the arguments have been processed (Petty and Cacioppo, 1986:40).

An advertiser will frequently aim to build certain brand associations in order to occupy a specific brand position (e.g., Keller, 1993; 2003). Hence, it would be in their interest not only for customers to respond with any thoughts, but hopefully generate a positive cognitive response index. Additional precision could be gained by a more detailed classification scheme. Specifically, when building a brand, the advertiser cannot rely exclusively on total thoughts, or a favorability – unfavorability index of those thoughts. The advertiser should also consider if the cognitive responses are related to the advertisement itself (i.e., layout), or the merits of the brand arguments presented (i.e., brand related cognitive responses). The focus of

the current research is brand attitudes, not attitude toward the advertisement, consequently, a brand cognition index represent the appropriate test of brand elaboration in the current research.

Prime content – advertising claim congruence represents the suggested driver of elaboration likelihood in the current research, and as such, one should expect processing differences across congruence conditions. Conditions with higher congruence imply that the claims in the advertisement match the content of the editorial material to a higher extent. During ad processing, this congruence will manifest itself – not before. As the recipients read, they experience congruence. In this case, it is likely that the recipients can elaborate more easily on the claims in the advertisement as they match already salient memory concepts. Compared to the less congruently primed recipients, they should also experience relatively higher applicability of the primed memory content on the arguments in the advertisements. In sum, they should be more likely to process the message argument, and consequently be more sensitive to the quality of the arguments in the message. The incongruently primed recipients have primed memory content accessible, but this content is not equally applicable to the arguments in the advertisement. They might still generate the same total of cognitive responses, but they are less likely to score equally on the brand cognition index. In fact, the simple accessibility of memory concepts might lead them to elaborate in directions other than what the advertising claims aim for, or simply regard the advertisement as irrelevant.

The basic ELM logic would also imply that if the congruently primed participants scrutinize the advertisement more extensively due to applicable memory content, they should also show more sensitivity to the quality of message arguments. If this assumption holds, one should expect congruently primed participants receiving weak arguments to respond with more negative than positive brand cognitions, and congruently primed participants receiving strong arguments should generate more positive than negative brand related cognitions. If the incongruently primed participants elaborate less extensively, one would not expect the same level of argument quality sensitivity to be reflected in their brand cognition index.

Some previous priming studies have gathered cognitive responses, however their manipulations of congruence are not directly comparable with that of the current research. Yi (1990a) had the participants provide lists of attributes they would consider when buying a computer after having been primed with computer advertisements. They gave their cognitive responses prior to rating their attitudes toward the computer in the target advertisement; hence, they might as well be seen as elaborating on the prime as the target advertisement. Yi's (1990a) study utilized an ambiguous target advertisement for a computer with no argument

quality manipulation. Accordingly both primes in the form of PC advertisements could be said to represent congruent conditions. The cognitive responses were not coded according to the procedure suggested by Petty, et al. (1981). Yi's main conclusion was that the key message elements of the two different prime advertisements resulted in them being mentioned first and more frequently in the cognitive responses. Based on the presented results, one cannot conclude if prime congruence increased elaboration. Yi (1990b) utilized a parallel procedure, however, this time the primes were in the format of four different magazine articles. The target advertisement had no argument quality manipulation. Cognitive responses were elicited after exposure of the target advertisement, asking them to provide product attributes they would consider if they were to buy a car (same category as the target ad). Cognitive responses were not coded into brand cognition indexes, rather the frequency of mentioning and order of mentioning analysis were the same as in Yi (1990a), showing that the editorials increase accessibility of attributes. Howard and Barry (1994) utilized stories to induce positive or neutral mood, and subsequently exposed participants to advertisements for shoes either congruent or incongruent with the priming stories. Argument quality was manipulated in the target advertisements, and cognitive message related responses were coded as suggested by e.g., Petty and Cacioppo (1986). The net thought ratio was only utilized as dependent variable in an interaction between argument quality and mood. Another question was to what extent induced mood lead participants to scrutinize congruent or incongruent advertisements differently. In the results for the congruence hypotheses they did however established a total message topic thought index disabling a conclusion about sensitivity to argument quality manipulation in congruent vs. incongruent conditions, also illustrated by the lack of test for the particular interaction of argument strength and congruence on total message topic thoughts.

Goldberg and Gorn (1987) collected cognitive responses to commercials embedded in happy or sad TV-programs; the commercials were not manipulated on the argument strength dimension. Their results showed that the happy (sad) TV-programs elicited more happy (sad) cognitive responses to the embedded advertisements.

Also within the TV-commercial domain, Aylesworth and MacKenzie (1998) found that program-induced mood influenced attitude toward the advertisement by affecting the number of cognitive responses to the advertisements, with more positive ad cognitions for participants in the positive mood condition.

The cited studies are not directly comparable to the current studies, but they still provide some empirical evidence that the advertising context does affect the content and

amount of cognitive responses given to embedded advertisements. Drawing on the previous discussion, and previous studies, it is hypothesized that the congruence between content of advertising context and claims in the advertisement facilitates elaboration of the advertising message. Specifically, the following hypothesis is proposed:

*H2: There will be more positive than negative brand related thoughts in response to strong arguments in the congruent prime conditions; more negative than positive brand related thoughts in response to the weak arguments in the congruent prime conditions. Such differences will be minimal in the incongruent prime conditions.*

The third hypothesis addresses the influence of congruence on the correlation between cognitive brand responses, and brand attitudes. Stronger correlation between attitudes and cognitive responses indicates that the attitude reflects greater message-relevant thinking (e.g., Chaiken, 1980; Petty and Cacioppo 1979; Wegener, Downing, Krosnick, and Petty, 1995).

The issue under hypothesis three is not necessarily one of amount of processing, but the extent to which the thoughts of higher elaborating participants are more influential on subsequent brand attitude than the thoughts of lower elaborating participants. If one assumes that the high elaborators scrutinize the message more extensively, they might be more likely to base their attitude on the thoughts they generate. Low elaborators may still think, but the link between their thoughts and the brand in the advertisement may appear weaker, one might say that the thoughts are less directing or decisive for the conclusion drawn, i.e., the attitude.

Additionally, if the low elaborators have generated the same total amount of thoughts, these thoughts might still be cue-based, shallow, and not interconnected. In other words, for high elaborators, one might say that a brand attitude might be characterized by higher belief strength between brand cognitions (beliefs) and brand attitude in a multi-attribute attitude model as for example suggested by Fishbein and Ajzen (1975; see also Lutz, 1975; 1991). In contrast, the belief strength of lower elaborators will be weaker, or less systematic: by implication the correlation between thoughts and attitudes should be lower<sup>12</sup>. Basically, both

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<sup>12</sup> It could be the case that even if the subject generates six cognitive responses, his attitude might only be based on one or two of these. For example, I (think) I know a lot about Apple computers, but my attitude towards Apple is defined by my liking of their CEO Steve Jobs. Apple enthusiasts on the other hand, will probably know a lot, and base their attitude on a more complex set of beliefs.



high and low elaborators may reach the same attitude judgment on a scale, but the basis for their score should be different.

In higher congruence conditions, the cognitive responses to advertising claims will fit more readily into already accessible memory content, in other words the accessible memory content is more likely to apply to the cognitive responses. The activated memory network has given directions to cognitive responses, and consequently, they should be easily accommodated into the existing schema of knowledge. In this situation, it is likely that the thoughts generated about the advertisement will be intertwined in current knowledge, and possibly gain belief strength as a function of fit. For participants in the incongruent condition, several results might surface. First, if they do elaborate somewhat on the brand claims, they won't have the same opportunity to easily accommodate these cognitive responses into the accessible memory content. This should reduce chances of brand information becoming coherently connected to accessible memory concepts thereby reducing accommodation. Second, if they demonstrate lower elaboration, the link between the few thoughts generated, and their brand attitude judgment may suffer.

As argued under hypothesis two, the nature of elaboration might be more effectively revealed through the favorable – unfavorable brand cognitions difference, than the total sum of thoughts. This applies just as much for hypothesis three, as the correlation between brand cognitions and brand attitude is assumed to be stronger at increasing levels of elaboration. The difference index captures this element of elaboration, hence the following hypothesis is proposed:

*H3: The correlation between brand attitude and the difference between positive and negative brand cognitions will be higher in the congruent prime conditions than the incongruent prime conditions.*

#### 4.1.3 Congruity and consequences of brand attitude

A basic assumption in the persuasion theories, and the main argument for studying elaboration, is that different levels of elaboration might yield attitudes with different strength related properties (Haugtvedt and Petty, 1992; Haugtvedt and Wegener, 1994; Haugtvedt, et al. 1994; Petty and Cacioppo, 1986; Petty, et al. 1995). One of the suggested strength related properties of attitudes are that stronger attitudes should have more impact on behavior than weaker attitudes (see e.g., Petty and Krosnick, 1995). Attitudes based on more extensive elaboration are as previously argued, rooted in a more elaborate cognitive structure, therefore

they may simply have more attributes supporting them than would be the case for attitudes based on less elaboration. In other words, the intra-attitudinal structure might be more developed for stronger than weaker attitudes (e.g., Eagly and Chaiken, 1995; Chaiken, Pomerantz, and Giner-Sorolla, 1995). If the inter-attitudinal structure were more developed for strong attitudes, one would expect less variability in purchase intentions of attitude objects for individuals with stronger attitudes than weaker attitudes. Participants with attitudes based on lower elaboration might still be positively inclined to purchase the attitude object, but as the attitude is rooted in shallower processing, one would expect greater variability in their purchase intentions. Put differently, the correspondence between their brand attitudes and purchase intentions might be lower. In their classical study of the moderating role of involvement in ad-processing, Petty, et al. (1983) found that the correlation between attitudes and purchase intention was significantly higher in the high-involvement group than the low-involvement group. This empirically supports the assumption that elaborated attitudes are more predictive of behavior.

The discussions of the previous hypotheses have provided the arguments for the assumption in the current research that congruence facilitates elaboration. By extension, the correlation between brand attitude and purchase intentions should be stronger in the congruent prime condition than the incongruent prime condition. In the congruent prime condition, given increased elaboration, the participants have had better opportunity to intertwine and also test the advertising claims against primed memory concepts. Incongruently primed participants have not had the same opportunity, and might be less certain about their attitudinal response – even though they might have developed the same total number of cognitive responses as the congruently primed participants<sup>13</sup>. Hence, the following hypothesis is proposed:

*H4: The correlation between brand attitude and purchase intention will be higher in the congruent prime conditions than the incongruent prime conditions.*

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<sup>13</sup> It could also be the case that the correlation is of equal size in the two prime conditions, but that the level of significance (and the expression of standard error of the correlation coefficient) is higher in the congruent than the incongruent prime condition.

## 4.2. Methodology

In this section we first discuss the design chosen for study 1. Then we outline the experimental procedure, before detailing the measurement and manipulations of independent and dependent variables, including pretests. We then turn to tests of the hypotheses, and ends this chapter with a discussion of the results.

### 4.2.1 Overview of design

To be able to test the hypotheses the design applied had to possess some important features. First, there was a need to control the level of congruence between the editorial context and the subsequent advertisement. Second, the design should enable control with prime-exposure, and preferably avoid too obvious links between the prime and the advertisement (cf. Bargh and Chartrand, 2000). Third, in order to ensure that the prime was read prior to the advertisement, the prime had to administered before the advertisement, in other words, the prime and the advertisement could not appear on the same page. Otherwise, there would be no control of what was processed first, the editorial context, or the advertisement. As the focal interest was the extent to which prime prompts elaboration, this sequence of administration was crucial. In addition to qualifying the temporality aspect of causality, this also strengthened the ability to control for confounding variables (i.e., the context serves as prime for the advertisement, not the opposite), a threat to the isolation aspect of causality (cf. Hunt, 1991:89-91; Bollen, 1989:41-45). Fourth, argument quality was employed as one means to assess differences in elaboration. Therefore, the hypotheses warranted tight control of administration of advertisements with varying levels of argument quality, while at the same time permitting different levels of prime-advertisement congruence. Fifth, the effect of contextual priming on elaboration and persuasion was not previously tested, thus demanding a sensitive design to facilitate at test of clear cases of congruence vs. incongruence, and strong vs. weak arguments. The current research prioritized internal validity. Sixth, the design should enable collection of cognitive responses to gauge the nature of processing. Finally, both the priming and the persuasion tradition brought together in this dissertation share an experimental design tradition. In order to assess the contribution of this dissertation to existing knowledge, it appeared logical to build on this experimental tradition – to obtain the same levels of control, to use the same means of exposure to treatment variables, and to gauge elaboration and attitude judgments in similar ways. The previous studies of effects of contextual priming have predominantly applied an experimental procedure (e.g., Coulter and Sewall, 1995; De Pelsmacker, et al. 2002; Iversen, 2003; Yi, 1990a;b; 1993). It

would be easier to assess the contribution of the current research if it followed the tradition of the previous studies. Accordingly, it was our contention that a randomized between-subjects factorial design was the best response to these requirements.

Research question 1 and the respective hypotheses 1 and 2 demanded two treatment factors: prime-advertisement congruence, and argument quality. Two levels on each factor, gave four conditions in the form of a 2 (prime congruence: congruent vs. incongruent) × 2 (argument quality: strong vs. weak) design. Experiment participants were only exposed to one prime congruence level, and one version of the advertisement, either strong or weak. Thus, a between-subjects administration was chosen. Additionally, to reduce impact of potential confounding variables, experimental participants were randomly assigned to the four conditions. The design for study one is visualized in table 1.

Table 1:  
Design for study 1

		Prime congruence	
		Congruent	Incongruent
Argument strength	Strong	<i>Condition A</i>	<i>Condition B</i>
	Weak	<i>Condition C</i>	<i>Condition D</i>

#### 4.2.2 Participants and procedure

Participants were 144 undergraduate marketing students at Ohio State University, who participated for extra course credit. Participants entered the experimental lab in groups ranging from 4 to 12, and were randomly assigned to one of four experimental conditions. Each was seated in front a computer, and the experimenter entered the condition in the MediaLab software (Jarvis, 2002) used in the experiment.

In reply to question 1, the logical priming manipulation for these studies was the editorial material preceding the advertisements. The participants were explicitly told to use whatever time they felt necessary to read instructions, and answer questions. Participants should first read a cover story to disguise the purpose of the prime. Via the cover story preceding the priming manipulation participants were told that they were to assess readability of editorials in an online (internet) context. Then they read one of two versions of an editorial story representing the primes. The stories were related to young consumers' consumption

behavior. No references to any advertisements or brands were made in the editorial stories. After reading the story, they answered questions about the format, readability, and layout of the story, and their preferences for ways of presenting advertisements and editorial material in internet-based newspapers. Next, a new cover story appeared prior to advertising exposure, to diminish demand artifacts or carryover effects from the prime. The purpose was to reduce chances that participants guessed the link between prime and advertisement. However, this task could not be so strong that it removed or otherwise reduced the salience of the primed concepts. In other words, awareness of the prime was not the main problem, but the concern was to reduce participants' awareness of its influence. Furthermore, because the prime had to precede the advertisements, advertisements and editorial material could not occur on the same page(s).

Then the participants entered the part of the experiment where they should evaluate the target advertisement. The cover story told them that they should evaluate different advertising formats on the Internet. This should lead them to expect more than one exposure. After being exposed to one of the two versions of advertisements for a fictional brand of shampoo<sup>14</sup>, they evaluated the advertised brand and the advertisement itself. Then the thought-listing procedure commenced, with screens popping up enabling them to enter one thought for each screen. When they felt that they had nothing more to say, they hit the escape key and completed a number of individual differences scales. Then they were asked to recall as many attributes of the advertised brand as possible, and to recall the name of the brand. Finally, as manipulation checks, they were asked to rate the quality of the arguments presented in the ads, and rate the extent to which the person featured in the priming story was either predominantly concerned with pleasure and fun, or functionality with the product she bought. At the end, a debriefing description was the final screen, telling them about the purpose of the experiment. Then the participants were thanked and dismissed. The whole session took approximately 15 minutes for each subject to conclude, with differences primarily resulting from the number of thoughts listed and attributes recalled. One participant used the scrolling wheel on the mouse, and missed the advertisement. He was excluded from further analysis.

The MediaLab software (Jarvis 2002) used in the experiment allowed us to measure in milliseconds how much time the participants used to read the primes and the advertisements respectively. The average prime exposure time was 66968.1 ms, with a standard deviation of

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<sup>14</sup> The advertisements were identical in their focus on functional benefits, but varied in argument quality.

23239.74 ms. Six participants had less than 1000 ms exposure to the prime. It would be impossible to read the prime material in less than a second, and as the prime would have to be read to make any sense, these participants were excluded from further analysis, reducing the total number of participants to 137.

### 4.2.3 Manipulations of independent variables

Study 1 entailed two manipulations: prime-target advertisement congruence, and argument quality.

#### 4.2.3.1 Prime congruence

It would be somewhat inaccurate to describe the prime (editorial story) as a manipulation by itself related to this study. Prime-advertisement congruence is the actual manipulation, or treatment, and occurs as a level of match between the prime and the brand concept position in the advertisement (cf. Park, et al. 1986). Thus, this first manipulation was a function of the editorial story, and the advertisement.

A functional brand concept as one out of three potential brand concepts as defined by Park et al. (1986) was chosen. Petty and Wegener (1998b) applied a similar brand concept in studies of congruence. A functional brand concept is defined as “one designed to solve externally generated consumption needs” (Park, et al. 1986:136). This kind of brand concept would normally emphasize the functional benefits of concrete product related attributes (as different from experiential or symbolic benefits derived from more abstract attributes). Shampoo was chosen as the product category in which to create a new, fictive brand. The experiment required a product most consumers would be experienced with, with varying levels of involvement, few economic barriers to switch, and trial purchasing should not require too large expenditures to hinder us from measuring purchase intention (in reply to H4). Additionally, the category is frequently supported by print advertisements, and it should be a category where new brands are launched so often that it allowed a credible launch of a new brand. Finally, the experiment required a manipulation of argument quality. This was feasible in the shampoo category based on the fact that real life advertisements tend to describe brand attributes open for this kind of manipulation. Most consumers have experiences with shampoo, and there are numerous brands available, from cheap private brands, to expensive designer brands sold exclusively at hairdressers. Additionally, brands with functional, experiential, and/or symbolic brand concepts can be found in this category. It is also a category where one would expect low to moderate baseline levels of elaboration likelihood. The shampoo advertisement was developed in strong and weak versions with a

functional profile based on a similar version (a quality oriented advertisement in their terms) developed and tested by Petty and Wegener (1998b) in their study of the elaborative capacity of matching message to personality traits (see also Petty, et al. 2000).

To obtain different levels of congruence between the editorial story and the advertisement, two stories were created. In the congruent condition, the story had to be functionally oriented (to match the functional concept of the brand in the advertisement). The incongruent condition called for a story of similar type as the congruent one, but it should mismatch the functional orientation of the advertised brand. To be able to prime memory concepts, we also needed to develop stories about issues familiar to the subject pool. Hence, the two stories described young students' consumption behavior. In the congruent prime condition, the story had a functional profile, whereas in the incongruent prime condition, the story had a hedonic or experiential profile. This strategy resembled the one adopted by Howard and Barry (1994). Following Bargh and Chartrand (2000), and Chaiken et al. (1995), this priming procedure fell in between mindset priming and motivational priming techniques. The two prime stories can be found in appendix 2.

The two stories were pretested to assess the extent to which they were perceived to be functionally oriented, or experientially oriented. 90 undergraduate students of Ohio State University (different from the students participating in the main experiment in study 1), rated one of the two stories on different items. As the participants in the main experiment only would receive one prime story, the pretest participants also rated one story each. The results of independent sample t-tests on these items are presented in table 2 below.

Table 2: Pretest results of editorial stories' profile

Item	Functional story (n=48)	Experiential story (n=42)	t-value
1. Article has a focus on functional benefits	4.21	3.33	2.76
2. Article has a practical orientation	4.50	3.69	2.78
3. Article has a benefit orientation	4.58	3.67	2.99
4. Article has a pleasure orientation	2.40	4.81	7.74
5. Article has an emotional orientation	2.77	5.10	7.91
6. Article has a desire-orientation	3.00	5.04	7.80
7. Article says consumption is experience	2.63	4.95	8.35
8. Article says consumption is enjoyment	2.52	5.00	9.30
9. Article says consumption is a reward	2.67	4.12	5.02
10. Article says consumption is fun	2.48	4.52	7.04

All items measured on 7-point scales: strongly disagree – strongly agree

The functional story was rated as significantly more functionally oriented, and less experientially oriented than the experiential story, and vice versa. Thus the conclusion was drawn that the stories had the profiles aimed for.

In addition, the stories were tested for readability and the extent to which they conveyed a clear story. Independent sample t-test showed that on readability, the stories scored equally well ( $M_{\text{functional}} = 5.42$ ,  $M_{\text{experiential}} = 5.57$ , n.s.) on a 7-point scale, and on conveying a clear story, they also scored equally ( $M_{\text{functional}} = 4.96$ ,  $M_{\text{experiential}} = 4.69$ , n.s.) on a 7-point scale.

Referring to the congruent vs. incongruent condition, the assumption in the current study was such that combining the functionally oriented story with the shampoo advertisement should create high degree of congruence. Combining the shampoo advertisement with the experientially oriented story, should create a lower degree of congruence.

#### **4.2.3.2 Argument quality**

A central concern in the current study was to enable detection of differences in elaboration across different contextual primes. Recall that the editorial stories prime either functional or experiential aspects of consumption, consequently the advertisements had to be either similar or dissimilar to the two primes. Hence, an advertisement for a new fictitious brand of shampoo was made. This entailed reviewing a host of different advertisements for shampoos to obtain ideas for functional arguments. Petty and Wegener's (1998b) manipulation of argument quality in advertisements for shampoos provided additional guidelines. As already mentioned, the message arguments in this advertisement should emphasize a functional brand concept (cf. Park, et al. 1986). A method that has proven quite useful in gauging extent of elaboration is to vary the strength of message arguments<sup>15</sup> (Petty, et al. 1976). This manipulation involved creating parallel versions of the shampoo advertisement that differed in terms of the cogency of arguments, while keeping the subject of the advertisement essentially the same (i.e., the functional brand concept orientation). The strong version of the shampoo advertisement contained arguments about vitamins, sun-protection, dandruff-prevention, etc. The other version contained much of the same type of information, but in significantly weaker versions (e.g., will reduce dandruff if used less than three times a week, will keep your hair healthy as long as you stay out of wind and rain). The advertisements contained the same picture, background, and number of arguments. The

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<sup>15</sup> Message arguments would here refer to the pieces of information presented in the brand's advertisement



advertisements were programmed in the HTML editor of Netscape 4.0 in order to make the advertisements look like a full-screen web-page pop-up consistent with the cover story of the advertisement exposure part of the experiment. Appendix 2 presents the advertisements.

The quality of the different arguments in the advertisements was pretested one by one (see e.g., Wheeler 2001). 90 undergraduate students of Ohio State University rated either the strong or the weak arguments one by one where the scales were anchored bad – good, and weak – strong on (in this case) 7-point scales. Read in isolation, one particular argument might be perceived as stronger or weaker than it would appear in a real advertisement, but we nevertheless wanted to have an initial test to provide some idea of the extent to which the two versions of the advertisements were relatively different in argument strength. Even though the advertisements contained the same number of arguments, and they were sometimes close to identical for some statements, the strength of each argument could only be evaluated based on whether or not they were significantly different from a scale midpoint. Put differently, it did not make sense to compare argument number 1 from the strong condition directly with argument number 1 from the weak condition, to assess if they were significantly different. Accordingly, the tables 3 and 4 show the means of these two items, compared with the scale mid-point of 4.

Table 3:  
Strength of weak arguments (n = 44)

	Weak-strong (t-values)	Bad-good (t-values)
1. A new brand of shampoo has just been developed. In tests, half of the people who tried Vital Essence thought it cleaned their hair as good as the shampoo they used at home, as long as they stayed out of wind and rain	1.98 <sup>a</sup> (11.46) <sup>b</sup>	2.00 (12.64)
2. This is due to the new scientific formula with synthetic silicone. It will reduce some types of dandruff, and will not harm your scalp if you don't use it more than three times a week	2.55 (7.97)	2.41 (9.04)
3. The synthetic silicone formula provides a shell around each hair, making the hair easily manageable	4.09 (.42)	4.07 (.29)
4. This shampoo is clearly a good substitute for all the shampoos you have previously used	3.52 (2.28)	3.43 (2.49)
5. It comes in three different sizes, and the formula works for most types of hair	3.75 (1.26)	3.93 (.33)
6. Vital Essence will soon arrive at a supermarket near you	3.61 (1.90)	3.63 (1.77)

Note: <sup>a</sup>: Means on 7 point scale, values lower than 4 mean weaker and more bad

<sup>b</sup>: t-values

The results show that when judged one-by-one, some of the weak arguments are not significantly lower than the scale mid-point of 4. However, when collapsed to an index, the two scales on the six arguments yielded  $\bar{M} = 3.25$ , which is significantly lower than 4,  $t(1,43) = 6.49, p < .001$ . The conclusion was drawn that the arguments intended to be weak and

specious, taken together were perceived that way, even though some individual arguments failed to be significantly different from the scale mid-point of 4. The same tests were run for the strong arguments. Table 4 shows the results.

Table 4:  
Strength of strong arguments (n = 46)

Arguments in the advertisement	Weak-strong (t-values)	Bad-good (t-values)
1. A new brand of hair shampoo has just been developed. In tests, over half the people who tried Vital Essence thought it cleaned their hair better than the shampoo they used at home	4.72 <sup>a</sup> (4.24) <sup>b</sup>	4.80 (4.68)
2. Vital Essence's all-natural ingredients provide your hair with optimal protection against sun and pollution damage, while preventing dandruff and hair-loss	5.13 (8.01)	5.11 (6.84)
3. Provides essential vitamins for healthy hair and skin	4.89 (4.90)	5.00 (5.78)
4. The Vital Essence Shampoo is available in a variety of sizes, and unique formulas for different types of hair	4.91 (4.66)	4.98 (5.07)
5. With containers made of environmental-friendly and recyclable material and natural ingredients, you will not harm the environment	5.24 (7.79)	5.37 (8.93)
6. Vital Essence will be available at your hairdresser, to make sure you get the right one for your hair	4.74 (3.53)	4.78 (3.56)

Note: <sup>a</sup>: Means on 7 point scale, values lower than 4 mean weaker and more bad

<sup>b</sup>: t-values

This table shows that all the strong arguments were judged to be significantly stronger than the scale mid-point of 4. Collapsing the items into an index yielded the same results, with  $\bar{M} = 4.97$ , which is significantly higher than 4,  $t(1,45) = 6.49, p < .001$ . This average strength index offered a scale comparable to the average strength index of the weak argument test, and the two indexes were therefore collapsed into one. One-way ANOVA on this index with argument strength condition as between-subjects factor suggested that the strong arguments on average ( $\bar{M}_{\text{strong}} = 4.97$ ) were stronger than the weak arguments on average ( $\bar{M}_{\text{weak}} = 3.25$ ),  $F(1,89) = 122.1, p < .001$ . Based on these pretests, the conclusion was drawn that the strong argument version of the advertisement was significantly stronger than the weak argument version.

#### 4.2.4 Measurement of dependent variables

After being exposed to both the prime, and the advertisement, the participants indicated their attitudinal responses on a number of attitude measures, listed thoughts generated in response to the advertisement, and indicated the likelihood that they would purchase the new shampoo when it entered the market.

#### **4.2.4.1 Brand and advertisement attitudes, purchase intentions**

Brand attitude was measured after advertisement exposure with three seven point semantic differential scales with instructions and scale anchors: “To what extent did you find the brand... bad – good, negative – positive, unfavorable – favorable” (see e.g., Haugtvedt and Petty, 1992; Russel, 2002; Yi, 1990). A single item measured purchase intentions, “what is the likelihood that you would purchase the advertised shampoo when it becomes available in the market?” with scale anchors “not very likely – very likely” on a 7-point scale. Attitude toward the advertisement was assessed with three items. The participants were instructed to judge the advertisement itself, not the brand. The scales had the same introduction: “To what extent did you find the advertisement”, and the scale anchors were bad – good, dislike – like, unfavorable – favorable, all 7-point scales (cf. Aylesworth and MacKenzie 1998, MacKenzie and Spreng 1992).

#### **4.2.4.2 Thought listings**

In addition to the argument quality manipulation, a second means of detecting differences in elaboration was cognitive responses, or collection of thoughts listed in response to the advertisement (Cacioppo, Petty, and Harkins, 1981; Petty, et al. 1981). In the few priming studies in which cognitive responses have been collected (e.g., Aylesworth and MacKenzie, 1988; Goldberg and Gorn, 1987; Lord and Burnkrant, 1993; Schmitt, 1994; Yi, 1990a;b; 1993), the role they might have played in the effect of priming on persuasion is still not clear. In this dissertation, coding of advertisement or brand related positive and negative responses (favorability of advertisement vs. brand related elaboration), and counting of number (amount of elaboration) will provide useful information about extent and direction of processing. In the first experiment, participants entered their cognitive responses directly into the experiment software, as in figure 2 below:

Figure 2:

### Example of thought listing interface and instructions

Please type all thoughts you recall going through your mind while viewing the brand-advertisement. Do not bother with grammar, or spelling, just type one thought in each of the fields that will pop up underneath! IT IS VERY IMPORTANT THAT YOU HIT ENTER AFTER EACH THOUGHT, THEN A NEW THOUGHT IN THE NEXT BLANK FIELD THAT APPEARS.

You have two minutes, but if you are finished early, you can continue by hitting the <esc> key

1.

Press ENTER after each response...

Two independent judges coded the responses given into the following categories: positive brand responses, negative brand responses, neutral brand responses, positive advertisement responses, negative advertisement responses, neutral advertisement responses, and neutral responses (like e.g., “my head is aching, I am hungry”). The primary interest was the difference between positive brand cognitions minus negative brand cognitions. Analysis showed that the correlation among the two judges’ codings were  $r_{positive\ judge\ A,\ judge\ B} = .821, p < .0001$ , and  $r_{negative\ judge\ A,\ judge\ B} = .847, p < .0001$  respectively. Then, indexes were established for the two judges respectively (positive brand cognitions – negative brand cognitions). The indexes of the two judges were highly correlated,  $r_{index\ judge\ A,\ index\ judge\ B} = .791, p < .0001$ .

#### 4.2.4.3 Ancillary measures

In addition to the focal variables of the study, several other measures were also gathered. After completion of the different attitude measures, participants completed the need for cognition scale (Cacioppo, Petty, and Kao, 1984), need for evaluation (Jarvis and Petty, 1996), propensity to self-reference (Haugtvedt, 1994; Shakarchi and Haugtvedt, 2004), and the reduced 13-item self-monitoring scale (Lennox and Wolfe, 1984). These variables do not concern hypotheses in the current research, and won’t be discussed further.

Last, the students completed measures of age, sex, and student id, before a new screen appeared that debriefed them on the purpose of the experiment they had been participating in.

A complete list of all measured items can be found in appendix 3.

## 4.3 Results

This section first reports results of manipulation checks, before testing the hypotheses 1 through 4.

### 4.3.1 Manipulation checks

At the end of the experimental session, participants were asked to indicate their agreement with three statements designed to assess the extent to which the experimental manipulations were successful. These questions were placed late in the experiment to avoid them confounding or biasing attitudinal responses and thought listings. To assess argument quality, they were asked to rate the quality of the arguments presented in the advertisement. For the argument quality manipulation to be judged as successful, a main effect of argument quality should be obtained, that is, the strong version of the advertisement should be perceived as stronger regardless of priming condition. A 2(argument quality)  $\times$  2(prime congruence) ANOVA produced only a significant main effect of the argument quality manipulation as expected ( $F(1,133) = 16.42, p < .001$ ). Participants in the strong argument condition rated argument significantly higher ( $M_{\text{strong arguments}} = 4.35$ ), than participants in the low argument quality condition ( $M_{\text{weak arguments}} = 3.43$ ), lending support to the assumption that the manipulation was successful.

For assessment of priming manipulation, two questions were asked. The first asked the extent to which the featured girl in the priming story was primarily concerned with quality and functionality when she bought products. A 2(argument quality)  $\times$  2(prime congruence) ANOVA on this item gave only the expected significant main effect of priming manipulation. Participants who received a functional prime (congruent with the advertisement) agreed significantly more ( $M_{\text{congruent}} = 5.35$ ), than those who received the incongruent prime ( $M_{\text{incongruent}} = 4.51, F(1,133) = 11.41, p = .001$ ). Another question asked for agreement with the statement that the featured person in the prime was primarily concerned with fun and stuff that pleases her. A 2(argument quality)  $\times$  2(prime congruence) ANOVA on this item gave only a significant main effect of the prime, this time with participants in the incongruent prime condition agreeing more ( $M_{\text{incongruent}} = 5.54$ ), than those who received the congruent prime ( $M_{\text{congruent}} = 3.04, F(1,133) = 110.37, p < .001$ ). Combined, these results suggested that the manipulations were successful.

### 4.3.2 Test of hypothesis 1

The first hypothesis predicted an interaction between prime congruence and argument quality on brand attitudes. Specifically, it predicted that brand attitudes would be more positive in the congruent prime strong argument condition than the congruent prime weak argument condition, and that smaller differences should be observed between the incongruent prime strong argument condition and incongruent prime weak argument condition. Basically, the assumption was that sensitivity to the argument quality manipulation should be more prominent in the congruent than the incongruent prime condition. This would provide initial evidence that priming might facilitate elaboration (enhance scrutiny) of persuasive messages.

The three brand-attitude measures were highly interrelated ( $\alpha = .953$ ), and a factor analysis with maximum likelihood rotation and varimax extraction yielded a one-factor solution accounting for 87.4% of the variance. Hence, a brand attitude index was established by adding the three items, and dividing the sum by three, thus establishing an averaged summated rating scale (Hair, et al. 1998:129). Table 5 shows cell-, and marginal means of brand attitudes in study 1.

Table 5: ANOVA results  
Effects of prime congruence and argument quality  
on brand attitude Study 1

		Prime congruence		Marginal means
		Congruent (n = 35)	Incongruent (n = 35)	
Argument quality	Strong (n = 32)	5.04 (1.10)	4.96 (.99)	5.02 <sup>b</sup>
	Weak (n = 35)	3.56 (1.44)	4.77 (1.22)	4.17 <sup>b</sup>
Marginal means		4.30 <sup>a</sup>	4.87 <sup>a</sup>	

<sup>a</sup>: Main effect of prime sig.  $p = .025$

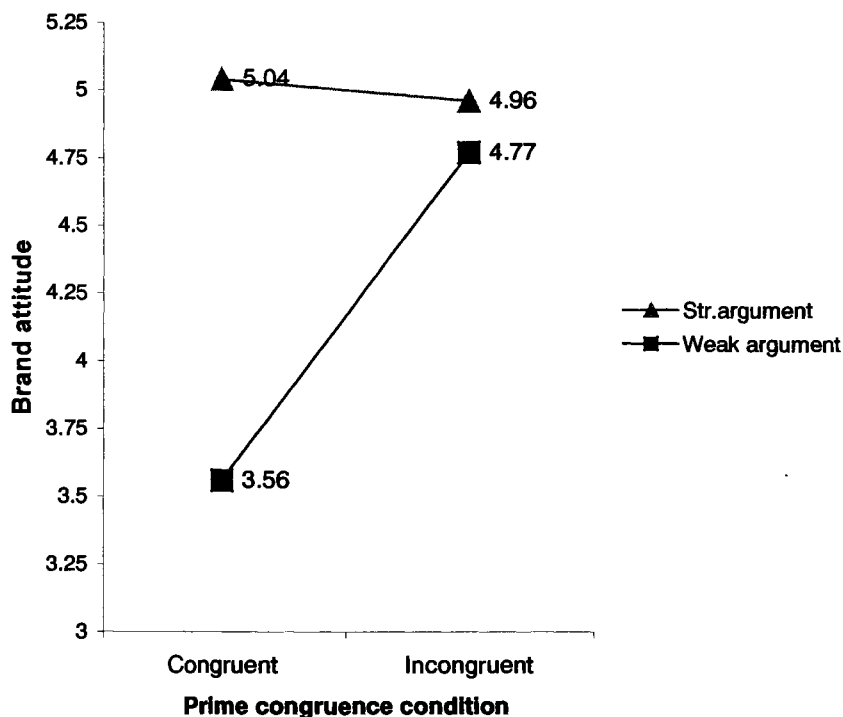
<sup>b</sup>: Main effect of argument quality sig.  $p < .001$   
Std.deviation in parentheses.

A 2(argument quality)  $\times$  2(prime congruence) between subjects ANOVA on the brand attitude index gave the following results. A significant main effect of argument strength ( $F(1,133) = 16.46, p < .001$ ) showed that participants rated the brand more favorably in the strong condition ( $M_{\text{strong arguments}} = 5.02$ ) than in the weak condition ( $M_{\text{weak arguments}} = 4.17$ ). A

main effect of priming was also significant ( $F(1,133) = 7.53, p = .007$ ). Inspection of means showed that a congruent prime resulted in lower brand attitude ( $M_{\text{congruent}} = 4.3$ ) than the irrelevant prime ( $M_{\text{incongruent}} = 4.87$ ). Importantly, both these main effects were qualified by a significant interaction between prime congruence and argument strength. The interaction between prime congruence and argument quality was the primary prediction in H1. Overall, the interaction was significant ( $F(1,133) = 9.8, p = .002$ ), supporting the predicted increased sensitivity to the argument quality manipulation in the congruent prime condition. The incongruently primed participants showed no such sensitivity. Simple effect tests within the congruent prime condition showed that the strong argument version yielded significantly more positive attitudes ( $M_{\text{congruent, strong}} = 5.04$ ), than the weak argument version of the advertisement ( $M_{\text{congruent, weak}} = 3.56$ ),  $F(1,66) = 21.96, p < .001$ . In the incongruent prime condition, similar analysis showed no differentiation in brand attitude as responses to strong ( $M_{\text{incongruent, strong}} = 4.96$ ), vs. the weak argument version of the advertisement ( $M_{\text{incongruent, weak}} = 4.77$ ),  $F(1,69) = .51$ .

Figure 3:

Prime congruence x argument quality interaction study 1



The pattern in figure 3 clearly shows that participants were more sensitive to the manipulation of argument quality in the congruent prime condition, and that this sensitivity

disappeared in the incongruent prime condition. It could be the case that the amount of time spent on reading the prime and the advertisement could confound some of the presented results. Specifically, could it be that the congruent condition participants spent significantly more or less time on reading either the prime or the advertisement? One option could be that participants in congruent prime conditions felt more motivated to process the advertisement, and consequently spend more time scrutinizing the advertisement. If this was the case, one could expect a main effect of prime on time spent on advertising exposure, and furthermore, advertising exposure time could serve as a significant covariate on brand attitudes.

As measures of both prime and advertisement exposure time were collected, analyses were conducted to assess this option. First, did participants in the four conditions spend unequal time reading the prime? A 2(argument quality) × 2(prime congruence) ANOVA on prime exposure time gave no significant main effects, nor interaction effects ( $M_{\text{congruent prime strong argument}} = 67858.1$  ms,  $M_{\text{congruent prime weak argument}} = 67687.9$  ms,  $M_{\text{incongruent prime strong argument}} = 69517.3$  ms,  $M_{\text{incongruent prime weak argument}} = 62885.2$  ms). Similar analysis with advertising exposure time as the dependent variable gave no significant main effects, nor interaction effects ( $M_{\text{congruent prime strong argument}} = 41012.4$  ms,  $M_{\text{congruent prime weak argument}} = 42115.3$  ms,  $M_{\text{incongruent prime strong argument}} = 36479.5$  ms,  $M_{\text{incongruent prime weak argument}} = 38310.3$  ms). The main effect of prime approached significance, ( $F(1,133) = 2.45, p = .12$ ), meaning that participants in the congruent prime condition spent on average 4168.94 ms more on the advertisement than the participants in the incongruent condition, however without any significant effect on brand attitudes. Second, to further check if exposure times affected brand attitude, a 2(argument quality) × 2(prime congruence) ANCOVA was run on brand attitude with prime and advertisement exposure time as covariates. The covariates did not approach significance ( $F_{\text{prime exposure time}}(1,131) = .738, p > 1$ ), ( $F_{\text{advertisement exposure time}}(1,131) = .953, p > 1$ ). None of the effects of the treatment factors changed substantially from the ANOVA to the ANCOVA.

The results confirm hypothesis 1, and lend initial confirmation to the basic assumption forwarded in this study that priming affects elaboration. However, in addition to the argument quality sensitivity identified to support this basic notion, the nature of the cognitive processes should also be different between priming conditions in order to provide further evidence. This was the focus of the second hypothesis.

#### 4.3.2 Test of hypothesis 2

The second hypothesis concerned the nature of the elaborative processes occurring under different conditions of high vs. low contextual prime – advertising context congruence.



The basic assumption was that contextual prime – advertisement content congruence would prompt greater elaboration of message content than would incongruence. Specifically, there should be more positive than negative brand related cognitive responses to strong arguments in the congruent prime conditions; more negative than positive thoughts in response to the weak arguments in the congruent prime conditions. Such differences should be minimal in the incongruent prime conditions (H2). In order to test this hypothesis, a dependent variable was coded as the mean difference between positive and negative brand responses (see measurement section). This index served as a dependent variable in a 2(argument quality) × 2(prime congruence) ANOVA.

Table 6. ANOVA results  
Effects of prime congruence and argument quality on  
Positive – negative brand responses study 1

		Prime congruence		Marginal means
		Congruent (n = 34)	Incongruent (n = 35)	
Argument quality	Strong (n = 30)	.13 (1.96)	.47 (1.44)	.30 <sup>b</sup>
	Weak (n = 35)	-.94 (1.95)	.06 (1.78)	-.44 <sup>b</sup>
Marginal means		-.40 <sup>a</sup>	.26 <sup>a</sup>	

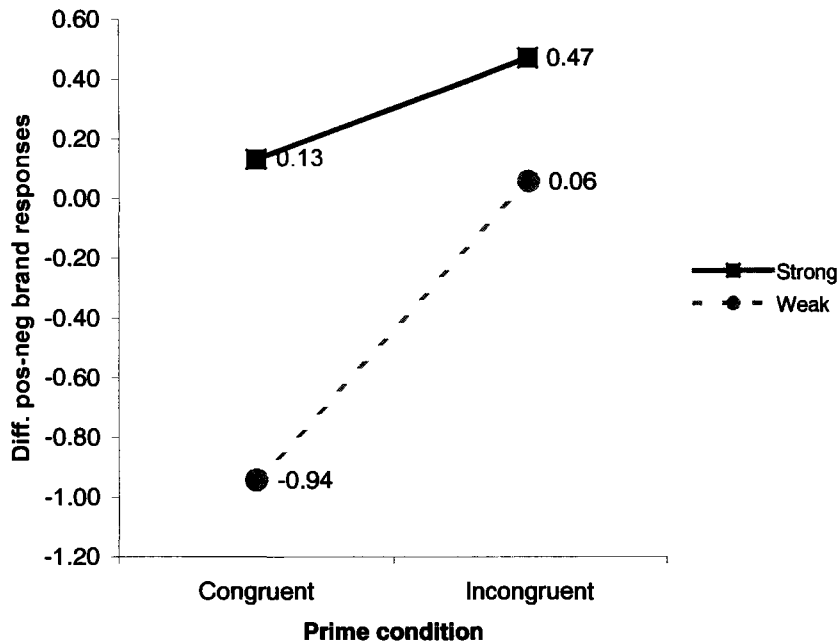
<sup>a</sup>: Main effect of prime sig.  $p < .05$

<sup>b</sup>: Main effect of argument quality sig.  $p < .025$

Std.deviation in parentheses.

As the table above shows, significant main effects were obtained for both the prime congruence factor ( $F(1,130) = 4.64, p < .05$ ), and the argument quality factor ( $F(1,130) = 5.76, p < .025$ ). Specifically, participants in the strong argument condition had a more positive brand cognition difference ( $M_{\text{strong}} = .30$ ) than participants in the weak argument condition ( $M_{\text{weak}} = -.44$ ). Participants in the congruent prime condition had a less positive brand cognition difference ( $M_{\text{congruent}} = -.40$ ) than participants in the incongruent prime condition ( $M_{\text{incongruent}} = .26$ ).

Figure 4:  
Effect of prime congruence and argument quality  
on cognitive response profile



The hypothesized interaction between prime congruence and argument strength did not reach significance, as shown in the figure above. However, the pattern of results was in the hypothesized direction, and the participants in the congruent prime condition showed more sensitivity to weak arguments (more negative than positive responses) than the incongruently primed participants. Simple effects tests within the congruent prime condition show that the brand response index is significantly less positive in the weak argument quality condition compared to the strong argument quality condition ( $F(1,63) = 4.88, p = .03$ ). The incongruently primed participants did not show this sensitivity in brand responses in the strong vs. weak argument quality condition ( $F(1,67) = 1.12, n.s.$ ). Despite this difference, it cannot be concluded that H2 obtained support.

When adding the number of positive and negative brand related cognitions, the mean number of thoughts was equal across priming conditions:  $M_{congruent} = 1.97$ , and  $M_{incongruent} = 1.9$ ,  $F(1,133) = .049, n.s.$  Hence, congruently primed participants did not elaborate more than the incongruently primed participants when it comes to *amount*, but the content of the responses still differed between the priming conditions. The extent to which this might have consequences for brand attitudes and purchase intentions was the focus for H3 and H4.

### 4.3.3 Test of hypothesis 3

Hypothesis 3 predicted higher correlations between the positive – negative brand cognitions index and brand attitude in contextual prime – advertisement content congruence conditions, than in the incongruence conditions. Basically, this hypothesis suggested that degree and nature of elaboration would be more closely related to the brand attitude in congruent conditions, than incongruent conditions. If this assumption holds, it lends support to the notion that attitudes in the congruent prime condition rely more on elaboration than attitudes in the incongruent prime conditions. In other words, even though the interaction between prime and argument strength on the brand cognition index was insignificant (H2), it could still be the case that participants in the congruent prime condition relied more on their elaboration (even though they don't necessarily elaborate *more positively*) when forming brand attitudes. In order to test this, separate analyses of correlation between the brand cognition index and brand attitudes in the congruent vs. incongruent conditions were run. The analyses showed that the correlation in the congruent prime condition was  $r = .623, p < .0001$  ( $n = 65$ ), and  $r = .284, p < .01$  ( $n = 69$ ) in the incongruent prime condition. Correlations in both conditions were significant, but the important test would be if there were significant differences in strength. The Fisher z-test showed that this difference was significant ( $z = 2.48, p < .01$ ), thereby supporting H3.

Interestingly, these results showed that even though the difference between positive and negative brand related cognitive responses was in favor of the incongruent prime condition, the relationship between cognitive responses and brand attitudes were stronger and more systematic for the congruently primed participants. As already shown, the mean number of thoughts was equal across priming conditions. Hence, the nature of the elaborative process, and particularly its content, appears to be different between the congruent and incongruent priming conditions. In this study, this difference resulted in more favorable consequences for the attitudes of congruently primed participants. So even though the total amount of brand related cognitions was equal across priming conditions, it could be that the congruently primed participants were able to tie closer links between the primed memory content and their cognitive responses to the advertisement, than the incongruently primed participants. In other words, in congruent conditions, it could be the case that the beliefs (cognitive responses) become more strongly related to the brand attitude. In priming terms, even though the total amount of elaboration might have been equal across priming conditions, the primed memory content was more *applicable* to the content of the elaborative responses to the advertisement

in congruent prime conditions. The next question then becomes one of whether these differences in elaborative processes translate into different behavioral consequences, as hypothesized in H4.

#### 4.3.4. Test of hypothesis 4

Hypothesis 4 predicted that the correlation between brand attitude and purchase intention would be higher in the congruent prime conditions than the incongruent prime conditions. Specifically, if the cognitive responses of the congruently primed participants are more closely intertwined with existing knowledge structures due to increased applicability, and hence are held more strongly, brand attitudes should be more systematically related with purchase intentions for the congruently primed participants than the incongruently primed participants. To test H4, correlations between brand attitude and purchase intention was run for the congruently and incongruently primed participants separately. The analyses showed that the correlation in the congruent prime condition was  $r = .785, p < .0001$  ( $n = 67$ ), and  $r = .631, p < .0001$  ( $n = 70$ ) in the incongruent prime condition. The Fisher z-test showed that this difference was significant ( $z = 1.81, p < .04$ ). So even though the correlation was strong and significant in both groups, it was significantly stronger in the congruent prime condition. This corroborated the finding from H3 that the nature of primed elaboration differed between congruently and incongruently primed participants. So even though the congruently primed participants didn't necessarily elaborate more extensively, the fact that they had primed memory content available into which they could more readily fit their cognitive responses to the prime target, lead their attitudes to be more closely related to purchase intentions. The correlation between brand attitudes and purchase intentions can be seen as one indicator of attitude strength (Haugtvedt, et al. 1994; Petty, et al. 1983; 1995), and as such, the preceding results indicate that contextual priming also might have consequences for attitude strength.

#### 4.4. Summary and discussion of study 1 findings

The purpose of study 1 was to provide initial evidence that contextual prime – target advertisement congruence affects the nature of elaboration given to claims in the advertisement, as identified through different empirical patterns. Specifically, if congruence did affect message elaboration and brand attitudes, a set of different results were expected at different levels of congruence:

- a) brand attitude extremity would be different, qualified by sensitivity to argument quality (H1),
- b) content of cognitive responses would be different, qualified by sensitivity to argument quality (H2),
- c) correlation between the cognitive brand response index and brand attitude would be different (H3),
- d) correlation between brand attitude and purchase intention would be different (H4).

All four hypotheses were in some way related to elaboration likelihood assumptions. First, if congruence facilitated elaboration, that would predict an interaction between congruence and argument quality on brand attitude as suggested by H1. Hence, an interaction between prime congruence and argument quality was the primary prediction in H1. Overall, the interaction was significant ( $F(1,133) = 9.8, p = .002$ ), supporting the predicted increased sensitivity to the argument quality manipulation in the congruent prime condition. In the congruent condition, participants noticed the argument quality manipulation, whereas this sensitivity disappeared for the incongruently primed participants. This lends initial support to the basic hypothesis forwarded in this dissertation: that contextual priming prompts elaboration, and consequently, that congruence between advertising context and advertising content need not be beneficial to the advertiser. On the contrary, if in congruent conditions, the brand's claims are perceived as weak and specious, congruence could penalize the attitudinal response due to enhanced elaboration.

Second, elaboration should also be evident through differences in cognitive responses to advertising claims in the different priming conditions. H2 predicted an interaction so that there should be more positive than negative brand cognitions in the congruent prime, strong argument condition than in the congruent prime, weak argument condition, whereas this difference should be insignificant in incongruent prime conditions. This interaction failed to obtain empirical support. Simple effects test within the congruent prime condition showed that congruently primed participants did report more negative than positive brand cognitions as response to weak arguments. Accordingly, traces of argument quality sensitivity were translated into cognitive responses, however not in the magnitude necessary for the interaction to become significant. Further analysis also showed no difference in the total amount of brand related cognitions between the congruently and incongruently primed participants. Taken together, this might imply that the contextual priming manipulation did not affect the amount

of elaboration as expected, but rather that it could indicate how elaborated cognitive responses were subsequently utilized in establishing judgments. This latter option was the focus of H3.

Third, both accessibility and applicability are important prerequisites for priming effects to occur (Higgins, 1996). Hence, in congruent prime conditions it was suggested that the claims in the target advertisements would fit more easily into both accessible and applicable memory content. Due to this match, it was further suggested that the cognitive responses of congruently primed participants would be more closely related to attitude towards the brand in the advertisement. In other words, the cognitive responses in the congruent prime condition could become more easily accommodated into primed memory content, and consequently become more directly linked to the attitudinal response. H3 predicted that this should be evident through higher correlation between cognitive brand responses and brand attitude in the congruent than incongruent prime condition. The results supported this prediction: the correlation in the congruent prime condition was  $r = .623, p < .0001$  ( $n = 65$ ), and  $r = .284, p < .01$  ( $n = 69$ ) in the incongruent prime condition. Correlations in both conditions were significant, but importantly, the correlation was stronger in the congruent prime condition ( $z = 2.48, p < .01$ ), thereby supporting H3. The closer correspondence between cognitive brand responses and brand attitude for congruently primed participants indicates that they rely more on their elaboration when establishing brand attitudes, despite the fact that they did not show more extensive elaboration in terms of total amount ( $M_{\text{congruent}} = 1.97$ , and  $M_{\text{incongruent}} = 1.9$ ,  $F(1,133) = .049$ , n.s.) and had less favorable thought index than the incongruently primed participants ( $M_{\text{congruent}} = -.40$ , and  $M_{\text{incongruent}} = .26$ ,  $F(1,130) = 4.64, p < .05$ ). However, as the cognitive responses they *did* make, found a memory content accessible that also was applicable; they appeared to utilize their cognitive responses more than the incongruently primed participants. Put the other way, the cognitive responses of incongruently primed participants did not find memory content that could easily accommodate them, therefore they were less utilized in forming the brand attitude. This could be a signal of more peripheral processing in the incongruent prime condition.

Finally, H4 started addressing the question if brand attitudes formed in the congruent prime condition were stronger than brand attitudes formed in incongruent prime condition. If the former brand attitudes were relatively more rooted in cognitive brand responses (H3), this should translate into a higher correlation between brand attitudes and purchase intentions for the congruently primed participants compared to the correlation for incongruently primed participants (H4). Petty, et al. (1983) showed that this correlation was higher for participants devoting more effort to message scrutiny, when motivation to elaborate was manipulated. The

findings in the present research corroborate their findings with another elaboration likelihood manipulation, as the current hypothesis obtained empirical support. Specifically, the correlations were significantly higher in the congruent prime condition compared to the incongruent prime condition.

Considering the results of the hypotheses in conjunction, they lend the first initial support to the basic prediction of this dissertation: that contextual priming of print advertisement can enhance elaboration, or message scrutiny. In such respect, study 1 findings support the contention that contextual prime content – target advertisement content congruence can affect elaboration as suggested by the multiple roles of variables postulate of the ELM (Petty and Cacioppo, 1986). Congruently primed participants are more sensitive to argument strength in the persuasive message, the argument quality manipulation gives somewhat more effect in the net favorability of cognitive brand responses, and their responses are more closely related to their brand attitudes. So, even though congruently primed participants don't necessarily elaborate more, the fact that the content of their cognitive responses are more easily accommodated by accessible memory content (Higgins, 1996) seems to imply that the advertising message has been more efficiently scrutinized, and applied to establish a brand attitude. Interestingly, these results are obtained even though there were no differences in amount of time spent on reading the prime and the advertisement in the different conditions.

One key assumption of priming is that participants might be aware of the prime (evidently, all participants read the prime to the same extent), but they are unaware of the prime's influence on subsequent perceptions and judgments (Bargh and Chartrand, 2000; Higgins, 1996). Translated to the results of study 1, it can be the case that elaboration has been triggered without participants' awareness.

Study 1 has also shown that congruence can be situationally induced, or in other words, that accessibility and applicability can be temporarily primed (Higgins, 1996). In that respect, this study extends on the previous studies of matching in persuasion, where congruence or matching frequently has been obtained by matching the message content to personality traits, attitude functions, or attitude object functions (e.g., Edwards, 1990; Edwards and von Hippel, 1995; Lavine and Snyder, 1996; Shavitt, 1990; Snyder and DeBono, 1985; 1989).

However, a key assumption of the ELM is that attitudes can be characterized by different strength properties depending on the elaborative process leading up to the attitude (e.g., Petty, et al. 1995). Study 1 found that the correlations between brand attitudes and

purchase intentions were significantly higher for the congruently primed participants, thus lending some support to the notion that contextual prime induced elaboration can cause stronger brand attitudes. However, the instance of congruence is temporal in nature, and the advertisement content is not matched to other more stable traits or characteristics of the individual. This might indicate that the strength results obtained are ephemeral, and won't stand in the face of an attack. Normally, other advertisers constantly try to steal your customers away, through attacking messages. The consumer will have access to other sources of information (i.e., consumer reports tests etc.) that can be held against the target brand.

A logical extension of the findings from study 1 would be to assess the strength of brand attitudes established in high vs. low congruence conditions more directly. Consequently, this was the purpose of study 2.



## **5. STUDY 2: CONTEXTUAL PRIMING AND ATTITUDE STRENGTH**

This study examines the extent to which attitudes formed or changed under different levels of contextual prime – advertising content congruence differ in strength. As such, this study extends the results of study 1. The chapter is organized as follows. The first section presents the theoretical background on attitude strength as related to persuasion. Hypotheses regarding the effects of prime congruence on attitude strength are then presented. Next, the design and methodology for study 2 are presented. The final sections include a report of the hypotheses tests and a discussion of the results.

### **5.1 Background: Attitude strength principles**

A central assumption in of the ELM is that attitudes established under different levels of elaboration may have equal extremity, yet differ in strength properties (e.g., Haugtvedt and Petty, 1992; Haugtvedt, et al. 1992; 1994; Petty and Cacioppo, 1986; Petty and Krosnick, 1995; Petty, et al. 1995). Reviews of these ideas in the marketing literature also suggest that marketers should not only aim to obtain positive or favorable attitudinal responses to their advertisements; they should also strive for strong attitudes (e.g., Haugtvedt, Leavitt, & Schneier, 1993; Haugtvedt & Priester, 1997; Keller, 1993; 2001; 2003). These suggestions are based on the assumption that stronger attitudes are more persistent (they decay slower); are more resistant to counter arguments (from competing brands); and they should be more predictive of behavior (e.g., Petty and Krosnick, 1995). The primary purpose of study 2 was to examine whether attitudes established in congruent prime conditions are more resistant to counter attacks than attitudes established in incongruent prime conditions.

The findings from Study 1 provide a good basis from which to study the issue of attitude strength. Results of Study 1 show that the attitudes for participants in the congruent prime condition and the incongruent prime condition did not differ significantly in response to the argument quality manipulation. That is, the brand attitudes of the two groups of participants exposed to very different contexts were equal in extremity. The underlying bases of the equally extreme attitudes were quite different as identified through the cognitive responses – brand attitude correlations, and the brand attitude – purchase intentions correlations. Such results are consistent with the pattern of data one would expect for strong attitudes (Petty, et al. 1983).

Study 1 has already suggested that contextual priming affects the nature of elaboration, but the question as to whether or not contextual prime induced elaboration might affect attitude strength remains unanswered. In the ELM, the attitude strength postulate says:

Attitude changes that result mostly from processing issue relevant arguments (central route) will show greater temporal persistence, greater prediction of behavior, and greater resistance to counterpersuasion than attitude changes that result mostly from peripheral cues (Petty and Cacioppo, 1986:21; Petty and Wegener, 1999:61)

This postulate argues that attitudes based on relatively higher levels of elaboration are considerably stronger than attitudes based on lower elaboration. There are several reasons why attitudes based on higher elaboration might be stronger.

Attitudes are resistant if they have the ability to withstand attack<sup>16</sup>. The ELM predicts that individuals whose attitudes are changed or initially established based on extensive elaboration (e.g., high prime – target ad congruence), would naturally resist the influence of an attack better because they would be able to use their own initial cognitive responses to defend their attitudes (Haugtvedt and Petty, 1992). More specifically, the elaboration assumption is that more brand-related thinking will increase the likelihood that the brand-relevant information associated with the attitude will be more salient, or in other words, that the belief-attitude link is stronger. Hence, higher levels of elaboration may render the attitude more defensible at a later point in time. So, when encountering an advertisement from a competing brand, the customer will be more able to benchmark the belief-oriented brand claims from the attacking brand against the beliefs supporting the attitude of the incumbent brand. Additionally, salience due to elaboration might imply that the beliefs supporting the initial attitude are more easily retrieved. Once retrieved, previous levels of elaboration will determine if these beliefs offer sufficient reason to resist the attack, and help maintain current brand attitude (e.g., Haugtvedt and Petty, 1992; Haugtvedt and Wegener, 1994; Haugtvedt, et al. 1994).

It could also be that elaboration enhances the consistency between attitudes and underlying beliefs, thus making it easier to resist counter messages from competing brands (e.g., Chaiken, et al. 1995; Petty and Wegener, 1999:61). Chaiken and her colleagues use the term ‘evaluative-cognitive consistency’ to refer to the consistency that exists between a

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<sup>16</sup> Attitudes can persist over a longer period of time simply because they seldom or never become challenged. This refers to attitude persistence, and is related to inoculation theory (McGuire, 1964). In marketing applications, brand attitudes will frequently be subject to attacks or challenged with claims from competing brands. Consequently, attitudes’ resistance is a natural focus in the present study.

person's overall, abstract evaluation of an attitude object and the evaluative meaning of his or her beliefs about the object (Chaiken, et al. 1995:388). Additionally, one might expect that high-consistency persons' beliefs are more internally consistent in their implied evaluation of the attitude object than those of low consistency persons. In relation to attitude resistance, Chaiken, et al. (1995) state that they have observed that high consistency persons are more prone than low consistency persons to counterargue information that challenges their attitudes (Chaiken and Yates, 1985).

Finally, higher elaboration might enhance confidence (Petty, et al. 1995). This means that with increasing levels of elaboration, and thereby increasing amount of thought, it is more likely that the consumer places confidence in both beliefs and resulting attitudes. This effect could also arise as a qualitative elaborative effect, i.e., that the process as such is qualitatively different in high elaboration conditions (cf. the second postulate of the ELM: Petty and Cacioppo, 1986; Petty and Wegener, 1999). Both the amount and nature of elaboration should favor confidence at higher levels of elaboration.

There are relatively few studies where attitudes are measured at two points in time. Studies where attitudes have been created or changed under experimental control, and then experimentally challenged and measured again are even more rare. Some studies have applied different sets of manipulations to assess attitude strength consequences. However, none of the persuasion studies have manipulated advertising context to examine attitude strength effects. They have primarily dealt with manipulations of the advertisement itself (e.g., repetition and variation) and/or aspects of the recipient (e.g., distractions, motivation etc.). Haugtvedt and Petty (1992, study 2) showed that the initial experimentally created beliefs of high need for cognition individuals were more resistant to counter messages than the experimentally created beliefs of individuals low in need for cognition. High in need for cognition individuals tend to elaborate more on the initial message, and were therefore more able to resist.

Haugtvedt and Wegener (1994) manipulated the order of messages, that is either pro-con or con-pro a position, and participants' level of motivation to elaborate. They found that situations that foster high levels of message elaboration lead to greater influence on an initial message on final attitudes, whereas situations that foster low levels of message relevant elaboration lead to greater influence of a second message on final judgments. Haugtvedt, et al. (1994) manipulated advertising repetition and variation strategies, and found in study 2 that despite the appearance of equal effectiveness with respect to attitude extremity, persistence, and confidence, the type of advertising repetition strategy differentially influenced the extent to which individuals resisted change in the face of a counter persuasive attack. Hence, the

Haugtvedt, et al. (1994) study demonstrated that attitude persistence and attitude resistance are two separate dimensions of attitude strength (see also Petty and Krosnick, 1995). Specifically, repetition strategies were more effective in producing persistent attitudes regardless of variation strategy, but attitudes based on substantively varied advertisements were more resistant in face of attack than were attitudes based on other repetition strategies.

## 5.2 Hypotheses

Advertising context has previously not been introduced into the persuasion situation as a variable potential to affect attitude strength. Nor have the priming studies to date assessed attitude strength. Under what conditions would one expect advertising context (as a prime) to influence attitude strength, and in particular, attitude resistance? The underlying explanation of the elaboration-attitude strength hypothesis is that if a variable increases the likelihood that an attitude is based on careful thinking rather than a simple cue process, this variable would also increase the likelihood that the resulting attitude is strong rather than weak (Petty, et al. 1995:94). In the present research, this variable is the contextual prime, or more precisely, the congruence between the contextual prime and the target advertisement.

Petty and Wegener (1999) specify salience as a variable explaining some of the effect of elaboration on attitude resistance. The assumption is that increased object-relevant thinking will increase the likelihood that object relevant information linked to the attitude object will be more strongly linked to the attitude, i.e., that the set of beliefs supporting the attitude is highly attitude-object specific. With increasing prime – target ad congruence it is likely that the primed memory content will provide direction to the elaboration that takes place, thus increasing the likelihood that the object relevant thinking becomes even more saliently tied to the attitude object. In the case of incongruence, the primed content could direct elaboration away from the presented attitude-object arguments, reducing the link between attitude-object and supporting belief-structure. Hence, with increasing congruence, it is likely that the supporting belief-structure will be more closely related to the attitude object than in the incongruent case, yielding an attitude more resistant in the face of a counter-message.

Additionally, congruence also rests on the applicability assumption from the priming literature (e.g., Higgins, 1996) – that is, for a prime to be congruent, it should not only facilitate access to an attitude and supporting belief structure, but the accessed memory content should also be applicable to the subject in question. With increasing congruence, we would have a situation that facilitates salience, and applicability, a situation that in sum

should make the attitude become more strongly embedded in a set of beliefs supporting that particular attitude.

Higher elaboration could facilitate evaluative-cognitive consistency as earlier argued. With increasing consistency, it is more likely that the resulting attitude will be strong, as it contains no conflicting 'evidence' on which to base the attitude. In this situation, the consumer has no reason to question the validity of his or her attitude, which should make it more resistant to attack. Again, with increasing congruence between prime and advertisement, the directional capacity of the prime should make it more likely that evaluative-cognitive consistency arise. In case of low congruence, there is less reason to assume such consistency. Consequently, with incongruence, chances are lower that the belief structure should support the attitude, resulting in a weaker attitude.

Finally, prime congruence might enhance attitude confidence (Petty, et al. 1995). In this situation, a contextual prime serves first and foremost the purpose of providing direction to the amount and content of elaboration. In high congruence situations, attitude confidence could be enhanced as the merits of the advertised brand is processed in lieu of the already primed memory content. In other words, the increased ease of processing in line with primed content yields no particular reason for the consumer to question his or her elaboration of the arguments in the advertisement. On the other hand, in a situation with low congruence between prime and advertisement, the primed memory content could be (in varying degrees) in opposition or orthogonal to the advertised arguments, thus leaving room to question the validity of the arguments. The consumer could then become less confident in both the arguments, and the elaborative interpretation of those arguments. Consequently, less attitude confidence would be expected in the incongruent compared to the congruent prime condition.

The previous studies of contextual priming effects on print advertisement judgments have not challenged primed attitudes with counter-messages. Hence, there are no specific empirical studies from which to obtain support for the assumption that attitudes formed in congruent prime conditions are more resistant to attack than attitudes formed in incongruent prime conditions. However, the preceding theoretical discussion leads to the following hypotheses:

*H5: Brand attitudes formed in conditions with higher congruence between contextual prime and advertisement will be more resistant to attacks from counter-messages than attitudes formed in conditions with lower congruence between contextual prime and advertisement.*

*H6: Brand attitude confidence formed in conditions with higher congruence between contextual prime and advertisement will be more resistant to attacks from counter-messages than brand attitude confidence formed in conditions with lower congruence between contextual prime and advertisement.*

## **5.3 Methodology**

In this section we first discuss the design chosen for study 2. Then we outline the experimental procedure, before detailing the measurement and manipulations of independent and dependent variables. We then turn to tests of the hypotheses, and end this chapter with a discussion of the results.

### **5.3.1 Overview of design**

An important assumption in the ELM is that attitudes formed under different levels of elaboration may be equally positive (or negative), but still they might differ in strength. In study 1, this might be the case for the attitudes of participants in the congruent vs. incongruent prime strong argument condition ( $M_{\text{strong arguments congruent prime}} = 5.04$  and  $M_{\text{strong arguments incongruent prime}} = 4.96$ ,  $F(1,66) < 1$ , n.s.). However, the participants' attitudes were not challenged in study 1, hence, attitude strength implications may only be assumed based on the results from tests of H3 and H4. In study 2, the purpose was to challenge the attitudes formed in the strong argument condition because of this apparent similarity in extremity across priming conditions<sup>17</sup>.

Therefore, the second study was an extension of study one in two respects. First, it introduced a counter message, or more precisely a message containing arguments questioning the validity of the claims in the advertisement. Second, attitude toward the advertised brand and attitude confidence were measured after the initial advertising exposure, and then once again after the counter message exposure.

In previous studies of attitude resistance, the counter message has only had one version, i.e., it has not been varied in counter attack strength (see e.g., Haugtvedt and Petty, 1992; Haugtvedt, et al. 1994). Additionally, the counter attack messages have been developed to be rather weak (Haugtvedt and Petty, 1992). However, we wanted to vary the strength of the attack to examine if participants were sensitive to the nature of the attack, or in other

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<sup>17</sup> Additionally, we chose to only use the strong argument conditions because we wanted the initial attitudes to be positive prior to attack.

words, if they were processing the attack. A manipulation of the strength of the counter attack message could allow us to better understand if an attack merely serves as a cue. Thus, it strengthens our opportunity to check if an attack’s ability to change attitudes is dependent on its strength (an argument based explanation), or if the attack affects brand attitudes regardless of strength. Thereby, we put the strength properties of contextually primed attitudes to a more severe test. If brand attitudes formed under different priming conditions differ in resistance, this should be identified through differences in attitude decay from pre- to post-attack attitude measurement.

The second study was a 2 (counter argument: strong vs. weak) × 2 (prime congruence: congruent, incongruent) × 2 (time of attitude measurement: post advertisement, post counterattack) mixed factorial design with the first two treatments as between subjects factors, and the last a repeated measurement factor within subjects, displayed in table 7.

Table 7:  
Design for study 2

		Prime congruence			
		Congruent		Incongruent	
		Pre attack	Post attack	Pre attack	Post attack
Attack strength	Strong				
	Weak				

### 5.3.2 Participants and procedure

Participants were 181 undergraduate marketing students at Ohio State University who participated for extra course credit. Participants entered the lab in groups ranging from 2 to 8 students, and were randomly assigned to one of the four between-subjects conditions. Each of the participants was seated in front of a computer separated from other participants. Then the experimenter entered the condition of the subject in the MediaLab software (Jarvis 2002) used in the experiment, and the participant was told to read instructions carefully, and complete the study at their own pace. The experimenter remained quietly in the lab during the session.

Study 2 followed the same sequence as study 1 to the point where attitude toward the brand in the advertisement was assessed. In contrast to study 1, they did not proceed to thought listings at this point. The reason was that the thought-listing task it self could serve as

a trigger to elaborate, and we did not want dilute the elaborative capacity of prime congruence or incongruence prior to attack by enforcing elaboration. They were however asked how confident they felt about the attitudinal responses given. The counter message part of the study commenced next. Participants read one of two versions (strong or weak) of a message questioning the quality of the shampoo brand previously advertised. No warning in the sense of a cover story was given prior to attack. Following the attack, the participants again rated their attitudes toward the brand and advertisement. Then they answered questions assessing confidence in attitudinal responses given after having read the attack message. One item also asked the participants to assess the strength of the attack message, serving as a manipulation check of the attack manipulation. Next, they answered items pertaining to their level of involvement in the product category of shampoo, and the same priming manipulations items used in study 1. Prior to the debrief, participants completed the thought-listings procedure as in study 1, and brand attribute and name recall tests. Then, the participants read a debrief, were thanked and dismissed. The experimental session took approximately 10 minutes for each participant to conclude.

### **5.3.3 Manipulations and measurement**

Study 2 entailed two between subject factors requiring manipulations (prime congruence, and counter message), whereas the third factor, time of measurement pre attack vs. post attack was measured as a repeated factor within subjects.

#### **5.3.3.1 Prime congruence**

Prime congruence was manipulated to obtain two levels, congruence and incongruence with the same stimuli combinations developed for study 1. To build on the findings from study 1, no alterations were made to the prime story or the advertisement. Furthermore, study 1 showed that mean brand attitudes did not differ significantly across the argument quality manipulation, indicating a very good opportunity to assess a key assumption in the ELM; that attitudes of equal extremity may differ in strength. Logically then, we aimed to replicate this equality of attitude extremity as a starting point before exposing participants to the attack message. Hence, in study 2, only the strong argument version of the advertisement was used. When combined with the functionally oriented prime vs. the experientially oriented prime, we obtained two levels of prime congruence due to the functional brand profile of the advertisement. For all other details, please refer to section 4.2.3.1.



### 5.3.3.2 Counter message

The message containing arguments attacking the claims in the advertisement represented the crucial manipulation to obtain assessment of attitude resistance in study 2. Although not necessary to test H5, we wanted to test two different versions of the counter message to see if attitudes in congruent prime conditions were more resistant to both strong and weaker counter messages. Other studies (e.g., Haugtvedt and Petty, 1992) only tested the effect of one version of a counter message (a rather weak attack). If congruently primed attitudes were more resistant to both stronger and weaker attacks, it would increase our confidence that contextual prime – advertisement content congruence facilitated stronger attitudes.

One challenge was to make the counter messages logically tied into the preceding line of stimuli and questions, otherwise we could expect that the counter messages were simply deemed as irrelevant. Accordingly, the introduction to the counter message said the following in both versions of the counter message: “Because of concern for their readers, the online newspaper wants to make sure that they are promoting high-quality products. Therefore, newspaper staff pre-tested the shampoo for a few weeks before the launch”. Then the strong and weak versions diverged. The strong and weak messages are shown in figure 5 and 6.

Figure 5. Strong counter message arguments

A summary of their judgments shows the following:

- On a ten-point scale (ten being the best), the average rating of the shampoo was only 3.
- More than half the staff said it made the hair feel more coarse
- 15% said they experienced increased dandruff problems
- 75% said they would rather stick to the shampoo they used before

Figure 6. Weak counter message arguments

A summary of their judgments shows the following:

- On a ten-point scale (ten being the best), the average rating of the shampoo was 6.
- Many reported that the shampoo-bottle was a bit slippery when wet
- Some did not like the color of the shampoo, and
- Some people did not like the scent of the shampoo

The two versions contained the same number of counter arguments. However, in the strong version, these arguments were more severe, questioning more directly at the functional benefits of the shampoo (i.e., the dandruff and coarse arguments). Hence, they were assumed to be more detrimental to the functional format of the previous shampoo advertisement. In the weak version, a slippery shampoo bottle, and the use of “some” instead of numbers in percentages relating to color and scent, attempted to make the counter message a bit specious.

The two versions of the attack message were pretested on a sample of 48 students<sup>18</sup>. First they read the advertisement, and then one of the two versions of the attack message (i.e. a between subjects design). Then they were asked to rate the strength of the arguments on a 7-point scale ranging from 1 – weak to 7 – strong. Table 8 below shows the results for the weak version of the message.

Table 8:  
Strength of weak counter message arguments (n = 24)

	Weak-strong (t-values)
1. On a ten point satisfaction scale (ten being best) the average rating of the shampoo was 6	2.38 <sup>a</sup> (5.92) <sup>b</sup>
2. Many reported that the shampoo bottle was a bit slippery when wet	2.33 (6.78)
3. Some did not like the color of the shampoo	2.83 (5.06)
4. Some people did not like the scent of the shampoo	2.71 (5.29)

Note: <sup>a</sup>: Means on 7 point scale, values lower than 4 mean weaker

<sup>b</sup>: t-values

Even though the counter messages contained the same number of arguments, the strength of each argument could only be evaluated based on whether or not they were significantly different from a scale midpoint (4). Put differently, it did not make sense to compare counter argument number 1 from the strong condition directly with counter argument number 1 from the weak condition, to assess if they were significantly different. The

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<sup>18</sup> We acknowledge that the attack strength manipulation is a relative rather than absolute. Comparing strength perceptions against a scale midpoint is consequently a bit arbitrary. However, we wanted some indications of strength differences prior to running study 2, consequently, we conducted the following analyses on an item-by-item basis. Admittedly, the differences in scores on the collapsed indexes of strength perceptions are more comparable. Finally, we chose to assess strength in a between subjects design because the participants in the main experiment only would be exposed to one version of the counter attack message.

results in the table above suggest that the four counter arguments were all rated to be below the scale midpoint of 4, and indicated that the counter message was rather weak.

When collapsed to an index, the four counter arguments yielded  $\bar{M} = 2.52$ , which is significantly lower than 4,  $t(1,23) = 6.87, p < .001$ .

The same analysis for the counter arguments in the strong version gave the results presented in table 9.

Table 9:  
Strength of strong counter message arguments (n = 24)

	Weak-strong (t-values)
1. On a ten point satisfaction scale (ten being best) the average rating of the shampoo was 3	5.00 <sup>a</sup> (4.03) <sup>b</sup>
2. More than half the staff said it made their hair feel more coarse	5.04 (4.71)
3. 15% said they experienced increased dandruff problems	5.42 (6.18)
4. 75% said they would rather stick to the shampoo they used before	5.42 (6.55)

Note: <sup>a</sup>: Means on 7 point scale, values higher than 4 mean stronger  
<sup>b</sup>: t-values

All counter message arguments were rated to be significantly stronger than the scale mid point of 4. The results indicate that the counter message arguments developed to be stronger than those in the weak counter message indeed were perceived to be stronger. When collapsed to an index, the four counter arguments yielded  $\bar{M} = 5.22$ , which is significantly higher than 4,  $t(1,23) = 7.93, p < .001$ . This index was more comparable with that of the weak counter message index, and consequently, tested in one-way ANOVA with counter message strength as grouping variable. The results showed that the strong counter message arguments on average ( $\bar{M}_{\text{strong}} = 5.22$ ) were stronger than the weak counter message arguments on average ( $\bar{M}_{\text{weak}} = 2.56$ ),  $F(1,47) = 104.71, p < .001$ . Based on these pretests, the conclusion was drawn that the strong counter message version was perceived as significantly stronger than the weak counter message version.

### 5.3.3.3 Brand attitude and attitude confidence

Basically, the participants' brand attitude was measured with items similar to those in study 1 (cf. section 4.2.4.1). However, in study 2, measures were taken before and after attack, as described in the procedure section. The measurement procedure of study 2 was equal to study 1 up to the point of the attack message. After having read the counter message

in either weak or strong version, they answered these items once again, but with an additional instruction: “Now that you have read the test results, we would like to know how you feel about the product. Your feelings might be more positive, less positive, or unchanged. To what extent did you now find the brand to be bad – good, negative – positive, unfavorable – favorable?” The scale labels indicated 1 as bad, negative, and favorable, and 7 as the opposite. Only numbers were assigned to the scale points between the bipolar anchors. None of the items had a “don’t know” option.

Attitude confidence was measured with three semantic differential 7-point scales anchored “very unconfident – very confident”, “very uncertain – very certain”, and “very insecure – very secure”. The intro to these questions prior to attack was: “Please click the number that best characterizes how certain you are about the judgment you made about the shampoo”. The participants also answered the same three items after the counter message.

#### **5.3.3.4 Ancillary measures**

Based on the ELM, it can be assumed that individuals might be more prone to elaborate on messages concerning product categories in which they are highly involved. Even though study 1 found no differences on time spent on reading the prime or the advertisement between participants in the high vs. low congruence condition, we aimed to obtain a more direct control of this in study 2. Accordingly, three Likert type items measured participants’ involvement in the product category (see e.g., Laurent and Kapferer, 1985; Mittal and Lee, 1988): “I tend to care a lot about what shampoo I use”, “I think you run a big risk if you choose a shampoo that is inappropriate for your hair”, and “The choice of shampoo is important to me”. The scales were anchored 1: Strongly disagree, 7: Strongly agree, and no option for “don’t know”.

Protocols of cognitive responses to the advertisement, and recall of counter message claims were also collected following the same procedure as in study 1, please refer to section 4.2.4.2.

## **5.4 Results**

This section first presents results from manipulation checks and initial analyses, before turning to results from tests of hypothesis 5.

### **5.4.1 Manipulation checks**

In addition to testing whether the manipulations were successful, it was also important to assess if the brand attitudes of participants before counter message were equal across

priming conditions (as in study 1). A one-way ANOVA on brand attitudes before counter message showed no significant difference across priming condition ( $M_{\text{congruent}} = 5.35$ , vs.  $M_{\text{incongruent}} = 5.23$ ,  $F(1,180) = .81$ , *n.s.*). Hence, the congruently primed participants did not start out with more extreme attitudes than the incongruently primed participants.

For assessment of priming manipulation, study 2 followed the procedure of study 1. The first asked the extent to which the featured girl in the priming story was primarily concerned with quality and functionality when she bought products. One-way ANOVA with prime congruence as between subjects factor indicated that participants in the congruent prime condition agreed significantly more with this question ( $M_{\text{congruent}} = 5.07$ ), than participants in the incongruent prime condition ( $M_{\text{incongruent}} = 4.37$ ,  $F(1,180) = 10.25$ ,  $p = .002$ ). Similarly, participants in the incongruent prime condition agreed significantly more to the statement “Sara just goes for the stuff that pleases her, and lives for the joy of the moment” ( $M_{\text{congruent}} = 2.95$ ,  $M_{\text{incongruent}} = 5.47$ ,  $F(1,180) = 167.69$ ,  $p < .001$ ). At least these results indicated that participants had a clear recall of the profile of the prime editorial.

Attack strength represented the second manipulation of study 2, and participants were asked to rate the strength of the claims in the counter message. A 2(attack strength)  $\times$  2(prime congruence) ANOVA on this item gave only the expected significant main effect of attack strength. Participants who received the strong counter message rated this significantly stronger regardless of priming conditions ( $M_{\text{strong}} = 5.03$  vs.  $M_{\text{weak}} = 4.23$ ,  $F(1,180) = 19.89$ ,  $p < .001$ ). These results indicated that the counter message manipulation was successful. More importantly, the prime congruence condition did not affect the participants’ perception of counter message strength.

Based on the manipulation checks and the additional initial analyses we felt more confident that any systematic difference in resistance of brand attitudes pre vs. post counter attack message, could be attributed to the prime congruence manipulation.

#### 5.4.2 Test of hypothesis 5

Hypothesis 5 basically predicted that brand attitudes established in the congruent prime condition would resist a message attacking the advertised brand more than brand attitudes established in the incongruent prime condition. Empirically, brand attitudes should decay less from attitude measurement pre attack to post attack in the congruent prime condition compared to the incongruent prime condition.

The three pre-attack brand attitude measures were highly interrelated ( $\alpha = .917$ ), and a factor analysis with maximum likelihood extraction and varimax rotation yielded a one-factor

solution accounting for 78.95 % of the variance. Hence, a brand attitude index was established by adding the three items, and dividing the sum by three, thereby establishing an averaged summated rating scale (Hair, et al. 1998:129) with  $M = 5.29$ ,  $std.deviation = .91$ . The same was done for the three brand attitude measures post attack, with  $\alpha = .968$ . Similar factor analysis yielded a one-factor solution accounting for 90.87 % of the variance. The averaged summated rating scale for attitudes post attack had  $M = 3.04$ , and  $std.deviation 1.35$ .

To test hypothesis 5, a 2 (strong attack vs. weak attack)  $\times$  2 (congruent prime condition vs. incongruent prime condition)  $\times$  2 (pre attack message vs. post attack message) repeated measures ANOVA was run with the first two factors between subjects, and the third as a repeated within subjects factor<sup>19</sup>. Table 10 reports the results.

Table 10: ANOVA results  
Effects of prime congruence and attack strength  
on brand attitudes study 2

		Prime congruence			
		Congruent		Incongruent	
		Pre attack	Post attack	Pre attack	Post attack
Attack strength	Strong	5.44 <sup>a</sup> (.85) <sup>b</sup> 50 <sup>c</sup>	3.02 (1.19) 50	5.29 (.86) 46	2.34 (1.11) 46
	Weak	5.24 (.84) 41	4.51 (.79) 41	5.16 (1.09) 44	3.9 (1.16) 44
		5.34 <sup>d</sup>	3.77 <sup>d</sup>	5.22 <sup>d</sup>	3.12 <sup>d</sup>

a: means

b: std.deviation

c: number of participants

d: marginal means of prime congruence  $\times$  time of measurement

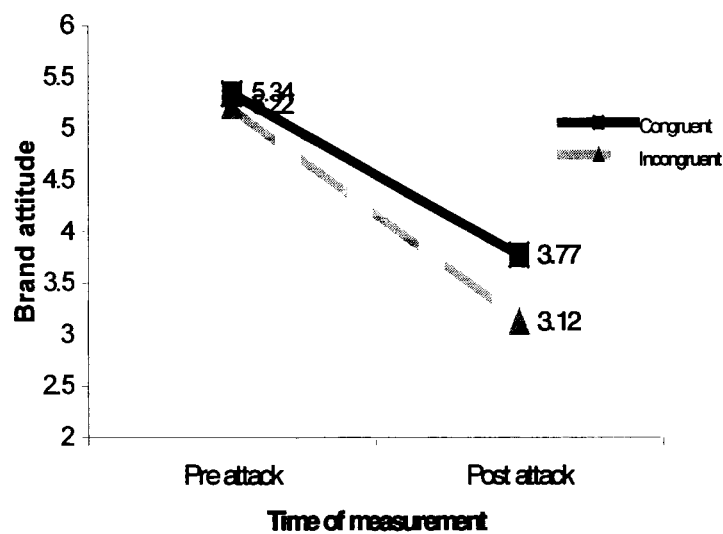
There was a significant main effect of the pre – post message within subject factor, with  $M_{attitude\ pre\ attack} = 5.28$ , vs.  $M_{attitude\ post\ attack} = 3.45$ ,  $F(1,177) = 420.71$ ,  $p < .000$ .

Participants' attitudes changed significantly from pre to post attack message. However, the important prediction of H5 was that congruently primed participants would resist attack better

<sup>19</sup> It was not strictly necessary to enter the attack strength as a factor in order to test H5. More precisely, we could also have analyzed the data for the two attack strength groups independently. By running the full model, we were at the same time able to control whether attitude resistance was under combined influence of both prime condition and attack strength, although not hypothesized.

than the incongruently primed participants. The predicted interaction obtained empirical support ( $F(1,177) = 8.73, p < .005$ ). The brand attitude scores for the two groups pre vs. post attack were  $M_{\text{attitude pre attack, congruent prime}} = 5.34$ , and.  $M_{\text{attitude post attack, congruent prime}} = 3.77$ , vs.  $M_{\text{attitude pre attack, incongruent prime}} = 5.22$ , and.  $M_{\text{attitude post attack, incongruent prime}} = 3.12$ , as can be seen in the bottom row of table 10. Accordingly, brand attitudes for the incongruently primed participants resisted the counter message less than brand attitudes of the congruently primed participants as predicted in H5. As the three-way interaction of prime congruence, attack strength, and time of measurement failed to reach significance, the significant two-way interaction indicates higher attitude resistance among the congruently primed participants, even when attack strength is accounted for. This is shown in figure 7.

Figure 7:  
The effect prime congruence and time of measurement on brand attitude



Additional results showed a main effect of attack strength, with participants in the strong attack condition reporting lower brand attitudes than participants in the weak attack condition ( $F(1,177) = 31.81, p < .005$ )<sup>20</sup>. This main effect was logically qualified by a significant interaction with time of measurement ( $F(1,177) = 89.18, p < .000$ ). Apparently, it was not only sufficient to be exposed to an attack for attitudes to change, the effect of attack strength also suggests that the cogency of the attacking message was important. In

<sup>20</sup> The conceptual meaning of main effects of the between subjects factors in this study is somewhat odd, as the dependent variable is the average of the within-subject factor.

methodological terms, this suggests that it might be appropriate to vary the strength of counter messages in studies of attitude resistance. However, we cannot conclude that congruently primed participants were more sensitive to attack strength than in congruently primed participants, as attack strength failed to interact significantly with prime congruence.

Finally, a significant main effect of prime congruence ( $F(1,177) = 9.884, p < .005$ ) also showed that brand attitudes were on average lower for incongruently primed participants than for congruently primed participants ( $M_{\text{congruent prime condition}} = 4.55$ , vs.  $M_{\text{incongruent prime condition}} = 4.17$ ). Prime congruence did not interact with attack strength ( $F = .081, n.s.$ ).

No particular interactions between the attack strength manipulation and the other factors were predicted. However, as other attitude resistance studies only had utilized one version of attack message, it was potentially interesting to see if the two way interaction between prime congruence and time of measurement (i.e., attitude resistance) was found for the weak and strong attack groups. Hence, a 2 (congruent vs. incongruent)  $\times$  2 (pre attack vs. post attack) repeated measures ANOVA was run for each of the attack strength conditions. In the strong attack group, significant main effects of time of measurement ( $F(1,94) = 348.48, p < .000$ ) and prime congruence ( $F(1,94) = 7.5, p = .007$ ) were qualified by a significant interaction between prime congruence and time of measurement ( $F(1,94) = 3.32, p = .072$ ). In the weak attack group, significant main effects of time of measurement ( $F(1,83) = 99.48, p < .000$ ) and prime congruence ( $F(1,83) = 3.25, p = .075$ ) were qualified by a significant interaction between prime congruence and time of measurement ( $F(1,83) = 7.23, p = .009$ ). Accordingly, the resistance effect was slightly more prominent in the weak attack group. As previous studies had no attack strength manipulation, the fact that the prime congruence  $\times$  time of measurement interaction obtained support in both attack strength groups adds further support to the hypothesized attitude resistance consequences of contextual priming.

The initial manipulation checks indicated that our manipulations were successful. However, additional analyses were run to account for some potential confounding factors. Category involvement did not differ across priming conditions ( $M_{\text{congruent}} = 4.86$  vs.  $M_{\text{incongruent}} = 4.93, F(1,180) = .1, n.s.$ ). Thus, potential difference in advertisement processing caused by category involvement cannot account for the current resistance results. The participants also spent equal amounts of time reading the prime story ( $M_{\text{congruent}} = 64955.49$  ms. vs.  $M_{\text{incongruent}} = 68312.68$  ms.,  $F(1,180) = .91, n.s.$ ), and read the advertisement equally long ( $M_{\text{congruent}} = 38532.31$  ms. vs.  $M_{\text{incongruent}} = 38822.29$  ms.,  $F(1,180) = .015, n.s.$ ). Accordingly, there were no significant differences between the priming conditions on these potential confounding variables.



### 5.4.3 Test of hypothesis 6

The results from tests of H5 indicated that attitudes of congruently primed participants were more resistant than attitudes of incongruently primed participants, as shown through less decay in attitude measures from pre to post attack. Another aspect of attitude strength was related to the extent to which individuals felt more confident about their attitudes in the congruent prime condition. Hence, this aspect is not so much related to the extremity of the attitudinal judgment and its potential decay, but rather taps into the cognitive confidence one attaches to the judgment being made (i.e., trust in their own judgments). Hypothesis 6 predicted that the attitude confidence of congruently primed participants would be less affected, or resist counter attack better, than the attitude confidence of incongruently primed participants.

The three pre-attack attitude confidence measures were highly interrelated ( $\alpha = .904$ ), and a factor analysis with maximum likelihood extraction and varimax rotation yielded a one-factor solution accounting for 76.4 % of the variance. Hence, a brand attitude confidence index was established by adding the three items, and dividing the sum by three, thereby establishing an averaged summated rating scale (Hair, et al. 1998:129) with  $\bar{M} = 5.33$ , std.deviation = .99. The same was done for the three brand attitude confidence measures post attack, with  $\alpha = .942$ . Similar factor analysis yielded a one-factor solution accounting for 85.59% of the variance. The averaged summated rating scale for attitude confidence post attack had  $\bar{M} = 4.63$ , and std.deviation = 1.52.

To test hypothesis 6, a 2 (strong attack vs. weak attack)  $\times$  2 (congruent prime condition vs. incongruent prime condition)  $\times$  2 (pre attack message vs. post attack message) repeated measures ANOVA was run with the first two factors between subjects, and the third as a repeated within subjects factor, following the similar test logic of hypothesis 5. Table 11 reports the results.

Table 11: ANOVA results  
Effects of prime congruence and attack strength  
on brand attitude confidence study 2

		Prime congruence			
		Congruent		Incongruent	
		Pre attack	Post attack	Pre attack	Post attack
Attack strength	Strong	5.3 <sup>a</sup> (.99) <sup>b</sup> 50 <sup>c</sup>	4.83 (1.8) 50	5.31 (1.02) 46	4.17 (1.57) 46
	Weak	5.39 (.98) 41	5.15 (1.27) 41	5.33 (1.01) 44	4.4 (1.18) 44
		5.35 <sup>d</sup>	4.99 <sup>d</sup>	5.32 <sup>d</sup>	4.28 <sup>d</sup>

a: means

b: std.deviation

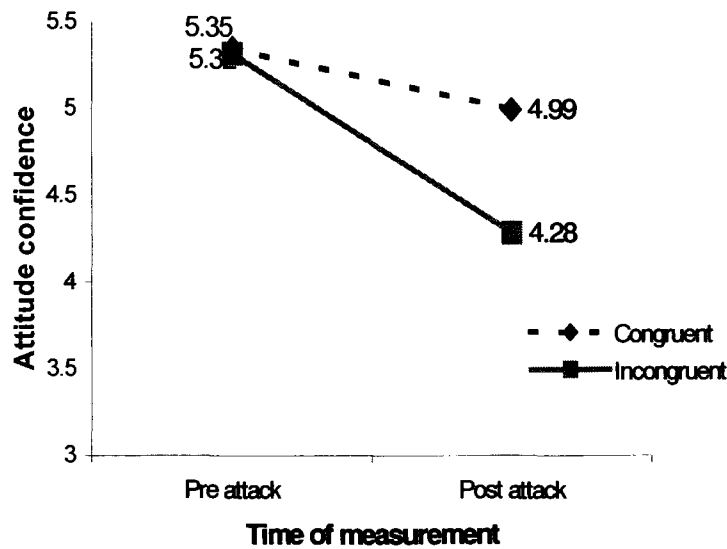
c: number of participants

d: marginal means of prime congruence × time of measurement

As for attitude resistance, there was also for attitude confidence a significant main effect of the pre – post message within subject factor, with  $M_{\text{attitude confidence pre attack}} = 5.33$ , vs.  $M_{\text{attitude confidence post attack}} = 4.64$ ,  $F(1,177) = 38.85$ ,  $p < .000$ . Participants' confidence in their attitudes changed significantly from pre to post attack message. There was also a significant main effect of prime with  $M_{\text{confidence congruent condition}} = 5.17$  vs.  $M_{\text{confidence incongruent condition}} = 4.8$ ,  $F(1,177) = 5.69$ ,  $p = .018$ . There were no significant main effect of attack strength or interaction effect between attack strength and the other two factors ( $F_s < 1$ ).

However, the important prediction of H6 was that congruently primed participants' attitude confidence would resist attack better than that of the incongruently primed participants. The two significant main effects were qualified by a significant interaction ( $F(1,177) = 9.26$ ,  $p < .005$ ), please refer to the bottom row of the table above for cell-means. Hence, attitude confidence fell more for the incongruently primed participants than the congruently primed participants. As the three-way interaction of prime congruence, attack strength, and time of measurement failed to reach significance, the significant two-way interaction indicates less decay in attitude confidence among the congruently primed participants, even when attack strength is accounted for. This is shown in the figure 8:

Figure 8:  
The effect of prime congruence and time of measurement on attitude confidence



The pattern clearly shows that the attitude confidence is less resistant for incongruently primed participants.

No particular interactions between the attack strength manipulation and the other factors were predicted in hypothesis 6. As in the tests of hypothesis 5, it would however be of interest to see if the two-way interaction between prime congruence and time of measurement on change in attitude confidence was found in for the weak and strong attack groups. Hence, a 2 (congruent vs. incongruent)  $\times$  2 (pre attack vs. post attack) repeated measures ANOVA was run for each of the attack strength conditions. In the strong attack group, there was a significant main effect of time of measurement ( $F(1,94) = 22.41, p < .000$ ), whereas the main effect of prime congruence was insignificant ( $F(1,94) = 1.99, n.s.$ ). The significant main effect was qualified by a significant interaction between prime congruence and time of measurement ( $F(1,94) = 3.81, p = .054$ ). In the weak attack group, significant main effects of time of measurement ( $F(1,83) = 17.83, p < .000$ ) and prime congruence ( $F(1,83) = 4.21, p = .14$ ) were qualified by a significant interaction between prime congruence and time of measurement ( $F(1,83) = 6.28, p = .014$ ). As previous studies had no attack strength manipulation, the fact that the prime congruence  $\times$  time of measurement interaction obtained support in both attack strength groups adds further support to the hypothesized attitude confidence consequences of contextual priming.

## 5.5 Summary and discussion of study 2 findings

The purpose of study 2 was to investigate whether brand attitudes of congruently primed participants were stronger than attitudes of incongruently primed participants, and in that manner, extend on the findings from study 1. Specifically, if level of congruence between editorial context and advertisement content did affect attitude strength in an attitude resistance perspective, at different levels of congruence we would expect:

- a) that brand attitudes of congruently primed participants resisted a message with counter attitudinal arguments better (i.e., changed less in brand attitudes pre vs. post attack), than attitudes of incongruently primed participants, (H5) and
- b) that the confidence attached to the attitudinal response made of congruently primed participants would resist a message with counter attitudinal arguments better than the confidence attached to attitudinal responses of incongruently primed participants (H6).

The underlying rationale behind these two predictions was that even though initial brand attitudes of participants in the strong argument condition in study 1 were equal across priming conditions, they could nevertheless be held with different strength, as suggested by the results from H3 and H4. However, to test this, the initial attitudes had to be challenged – a situation frequently occurring for consumers in many product categories. Competitors will tend to challenge the claims of each other’s brands, trying to sway customers. Hence, the resistance aspect of attitude strength was a logical focus of study 2.

The primary prediction of hypothesis 5 was an interaction between prime congruence condition, and time of measurement pre vs. post attack. This interaction should show that congruently primed attitudes resisted attack better than incongruently primed attitudes. Overall, the significant interaction ( $F(1,177) = 8.73, p < .005$ ), supported the prediction with more resistant attitudes for congruently primed participants. This result could be confounded by several factors; it could be the case that participants spent different amounts of time reading primes and/or advertisements depending on priming condition, and it could be the case that congruently primed participants felt more involved, and hence elaborated more than incongruently primed participants. However, the analyses do not support these confounding effects as one-way ANOVAs on brand attitudes before counter message showed no significant differences across priming conditions ( $M_{\text{congruent}} = 5.35, \text{vs. } M_{\text{incongruent}} = 5.23, F(1,180) = .81, n.s.$ ). Neither did category involvement differ across priming conditions ( $M_{\text{congruent}} = 4.86 \text{ vs. } M_{\text{incongruent}} = 4.93, F(1,180) = .1, n.s.$ ). The participants also spent equal amounts of time reading the prime story ( $M_{\text{congruent}} = 64955.49 \text{ ms. vs. } M_{\text{incongruent}} = 68312.68$

ms.,  $F(1,180) = .91, n.s.$ ), and read the advertisement equally long ( $M_{\text{congruent}} = 38532.31$  ms. vs.  $M_{\text{incongruent}} = 38822.29$  ms.,  $F(1,180) = .015, n.s.$ ). These results should indicate that before exposure to the attack, the situation in the two priming conditions was rather similar with respect to some potential confounds, and also similar to the situation in study 1. So, despite equally positive attitude across priming conditions, attitude resistance was significantly different, as predicted by the ELM. This pattern of results also suggests that level of congruence between editorial context and advertising content affects elaboration likelihood, thus corroborating the results from study 1.

Study 2 employed a manipulation of attack message strength not introduced in previous studies of attitude resistance. A significant main effect of attack strength showed as expected that attitudes resisted weak attack better than strong attacks. However, attack strength did not interact with prime condition – indicating that there was no systematic difference in the ways congruently vs. incongruently primed participants processed weak vs. strong attacks. Hence, it cannot be concluded that attack messages were differently elaborated upon as a function of prime congruence condition. On the other hand, within each strength condition, the interaction between time of measurement and prime congruence was significant, which increases our confidence in the results.

Attitude resistance characterizes the shift in the attitude score it self, and is a rather direct measure of attitude strength as addressed in hypothesis 5. In hypothesis 6, the focus changed to the individuals' judgments of their attitude as it addressed the confidence attached to the attitudinal judgment they had made. Attitude resistance and confidence in ones' attitudes can operate independently, but it is more likely that attitudes that show more resistance may be supported by higher confidence. Put the other way, if you are less confident in your attitude, why work 'hard' defending against an attack? Hence, hypothesis 6 predicted that attitude confidence of congruently primed participants would change less from pre to post attack compared to incongruently primed participants. This interaction obtained empirical support ( $F(1,177) = 9.26, p < .005$ ). Interestingly, there was no difference in attitude confidence pre attack ( $M_{\text{congruent}} = 5.34, M_{\text{incongruent}} = 5.32, F < 1$ ), so despite equal confidence initially (and equal product category involvement), confidence fell more for incongruently primed participants in response to the attack message. This interaction between prime congruence and time of measurement appeared in both attack strength groups, but the effect was slightly more pronounced in the weak attack group.

The failure of the attack strength manipulation to interact with prime congruence and time of measurement for both attitude resistance and attitude confidence renders a situation

where we cannot conclude that attack message arguments were processed differently across priming conditions, only that attacks in general produced more decay for incongruently primed participants. This was not particularly surprising, as the elaborative capacity of prime congruence only has been hypothesized to hold for the advertising message, a prediction obtaining predominant support. More precisely, congruence occurs between the editorial context and the advertisement, not between the prime and the attack message.

Summing up, the results from study 2 confirm the predictions that increasing congruence between editorial context and content of advertisement claims can produce stronger brand attitudes in terms of attitude resistance and attitude confidence. Furthermore, the occurrence of congruence produces these two effects in both strong and weak attack message groups.

## **6. DISCUSSION**

In this chapter, the findings of study 1 and 2 are reviewed and discussed in relation to the two overall research questions for this dissertation, and the related hypotheses. In addition, we will address some limitations and provide suggestions for future research. Finally, theoretical and managerial are accentuated.

### **6.1 Questions, predictions, and results**

In the opening scenario of this dissertation, you were asked to picture yourself reading a business magazine, e.g., Forbes. You had just read how successful executives organized themselves to become more efficient. Turning the page, a full-page, color advertisement for the new, enhanced PDA from Casio hit you right in the eye, describing important features of the new product. Alternatively, you could have read about the same executives' culinary interests, before turning the page to the same advertisement. The bottom line, practical question then was: do you think you processed the advertisement differently depending on the story you read? The two experiments reported in this dissertation would suggest that you would.

The practical question turned into research questions inspired by two theoretical approaches: priming and persuasion. Priming is a label used for procedures that increases the accessibility of some category or construct in memory (Sherman, et al. 1990) – in this research conceptualized as contextual priming represented by the editorial material (i.e., the context) preceding the advertisement. Previous priming research stopped short of detailing how persuasion (and elaboration) can be affected, whereas previous persuasion research stopped short of accounting for contextual priming. What could be the link between contextual priming and persuasion – or: could priming facilitate elaboration?

Prime congruence occurs as an instance where the prime (the editorial story preceding the advertisement) activates memory concepts that are applicable (Higgins, 1996) to the content of the prime target, in this case the advertisement. Logically, prime congruence will vary, and level of prime congruence represented the crucial link between priming and persuasion in the current research. Hence, we could have high prime congruence when the Forbes reader read about executives' efficient organizing, and low congruence if the story dealt with executives' culinary interests.

## Study 1, purpose and findings

Study 1 addressed the basic question: can contextual priming, through congruence between editorial context and advertisement content affect elaboration likelihood? As a central methodological tool, the quality of the arguments in the target advertisement was varied, a technique frequently utilized in the ELM to investigate extent of message elaboration. Basically, sensitivity to the argument quality manipulation should increase at higher levels of elaboration. Consequently, if prime congruence was to facilitate elaboration, the first prediction of study 1 was that sensitivity to argument quality should increase at higher levels of prime congruence, because primed memory content was applicable to the advertisement content. Conceptually, the assumption that congruence might affect attitudes has been tested with congruence between message content and factors like attitude functions (e.g., Lavine and Snyder, 1996; Snyder and DeBono, 1985; 1989), attitude object functions (e.g., Shavitt, 1990), cognitive and affective bases of attitudes (e.g., Edwards, 1990; Edwards and von Hippel, 1995), and mood-profile of preceding stories (Howard and Barry, 1994). These studies have primarily shown that matching or congruent messages tend to produce more positive attitudes than mismatching (incongruent) messages. In the functional attitude domain the attitude function – advertisement content congruence has established itself to such extent that it has obtained the label “the functional matching hypothesis of persuasion” (see e.g., Lavine and Snyder 1996; Petty, et al. 2000). However, the explanations and results are mixed, as illustrated by Millar and Millar (1990) who found mismatching to be more effective. Few of these previous studies employed an argument strength manipulation in order to assess degree of elaboration. Petty and Wegener (1998) suggested that matching effects on persuasion could be explained through at least three different mechanisms (see also Fabrigar and Petty, 1999; Petty, et al. 2000) based on the multiple roles of persuasion variables postulate (Petty and Cacioppo, 1986). Petty and his colleagues (Petty and Wegener, 1998b; Petty, et al. 2000) obtained congruence by matching message content, and personality traits or schemas self-monitoring and need for cognition. Wheeler (2001) also found that self-schema matching could serve to increase elaboration likelihood, so the assumption that congruence might facilitate elaboration is documented. However, it should be noted that the strategy to establish congruence in the current research by means of editorial context aiming at temporal activation is quite different from previous congruence manipulations.

The results for brand attitude extremity showed that incongruently primed participants failed to notice the argument quality manipulation – thus indicating low level of elaboration.



On the other hand, the congruently primed participants did notice this manipulation, with weak arguments yielding lower brand attitudes. The fact that this predicted interaction between argument strength and prime congruence on brand attitude was significant, lends initial support to the assumption that prime congruence can facilitate elaboration, in line with the multiple roles of persuasion variables postulate of the ELM. The elaborative capacity of prime congruence was predicted to give additional results to corroborate the attitude extremity results.

In studies of persuasion, verbal protocol analyses are common to investigate the content of elaboration. Specifically, in high elaboration likelihood conditions, if arguments are perceived as strong, the ratio of positive to negative cognitive responses should be predominantly positive, and the opposite if the arguments are perceived as weak. This sensitivity to argument quality should be significantly less at lower levels of elaboration. Transferred to the current studies of prime congruence, we predicted the similar pattern. However, this prediction failed to obtain empirical support, the profile of cognitive responses to strong and weak arguments did not vary as expected with prime congruence.

Considering the notion of applicability of primed content to the prime target from the priming literature (e.g., Higgins, 1996), cognitive responses of congruently vs. incongruently primed participants could be utilized differently. Specifically, it could be that congruently primed participants relied more on their cognitive responses when forming their brand attitudes compared to incongruently primed participants. In other words, it could be the case that congruently primed participants were able to tie closer links between their cognitive responses and brand attitude due to applicability – i.e., that the content of elaboration of congruent advertisement claims was more easily accommodated into accessible and applicable memory content. Results showed that the correlations between brand attitude and the cognitive response index were significantly higher among congruently primed participants, compared to incongruently primed participants.

If attitudes of congruently primed participants resulted from more elaboration and their attitudes were more strongly intertwined with their cognitive responses as the previous results suggest, we would also expect that the correlation between brand attitudes and purchase intentions were higher for congruently primed participants. The results of study 1 confirmed this prediction.

Of the four predictions of study 1, only the predicted interaction between prime congruence and argument quality on the ratio of positive to negative cognitive responses failed to reach significance – even though the pattern of results indicated that the cognitive

response index of the congruently primed participants were more sensitive to the argument quality manipulation. In conjunction, the results of study 1 do suggest that level of congruence between the editorial context in which an advertisement appear, and the content of that advertisement plays significant roles in the formation of brand attitudes. In other words, study 1 offered initial evidence that prime congruence can facilitate elaboration – even when congruence is temporarily established as in the present research.

## Study 2, purpose and findings

Competitors frequently challenge a brand's unique position – implying that brand attitudes will often face attacks in the nature of claims from competing brands, word of mouth from customers or other third-party sources, etc. So, one thing is knowing how prime congruence might enhance elaboration through sensitivity to argument quality – another thing is the extent to which brand attitudes of congruently primed customers yield less in face of attack than the brand attitudes of incongruently primed customers.

Study 2 extended study 1' results by introducing a counter attack message after the initial advertisement exposure then followed by a post attack brand attitude measure. Would brand attitudes of congruently primed participants resist better than those the incongruently primed? Would the confidence attached to brand attitudes of congruently primed participants resist better as well? The ELM predicts that brand attitudes are stronger when based on more extensive elaboration (Petty and Cacioppo, 1986; Petty, et al. 1995), and if the results of study 1 can be ascribed to enhanced elaboration, prime congruence should also affect attitude resistance and confidence.

In study 2, the attitudes of all participants on average fell after the attack, and more so after stronger attacks as illustrated by the significant main effect of the attack strength manipulation. However, study 2 also produced a significant interaction between prime congruence and time of measurement pre vs. post attack – meaning that the attitudes of incongruently primed participants resisted attack less than congruently primed participants. The attack strength manipulation failed to interact with prime congruence condition, implying no systematic difference in the way strong vs. weak attacks were processed between priming conditions, but no predictions were made for the attack strength manipulation. Previous attitude resistance studies did not manipulate the attacking message, and the results obtained here, that the interaction between prime congruence and time of measurement was significant overall, and separately within each attack strength group, corroborate the elaborative capacity of prime congruence signaled in study 1.

The confidence attached to one's attitudinal judgment might also be dependent on elaboration, as attitudes backed by more extensive elaboration might be held with more confidence than attitudes backed by less elaboration. As we saw in study 1, the cognitive responses of congruently primed participants were more closely related with their attitudes, which might lead them to be held with more confidence. Attitude confidence is rarely reported as a pre vs. post attack repeated measure as done here in study 2, but rather used as an attempt to measure attitude strength when no attacks are introduced. As the predicted interaction of prime congruence and time of measurement was significant, this showed that the confidence congruently primed participants had attached to their attitudinal judgments resisted attacks better than that of the incongruently primed participants. The attack strength manipulation showed similar effects for resistance in attitude confidence as it showed for resistance in attitude extremity.

In conjunction, the results from study 2 corroborated the results of study 1. Whereas study 1 established evidence that prime congruence facilitated elaboration, study 2 showed that attitudes of congruently primed participants were significantly stronger as they resisted attacks better than attitudes of incongruently primed participants. Study 1 introduced an argument strength manipulation not previously employed in studies of contextual priming effects. At the same time, it showed that contextual priming enhanced message scrutiny, thereby introducing an additional variable capable of affecting elaboration likelihood. Previous contextual priming studies have not tested attitude strength consequences of prime congruence. Furthermore, the current studies show that high congruence between editorial context and content of brand advertisements penalizes consumer judgments when advertisement content is perceived as weak and specious. These results are obtained with a manipulation creating temporary congruence, in difference from most of the previous studies of congruence or matching between advertisement content and attitude functions, attitude object functions, and some self-schemas.

The hypotheses of the present studies, and level of empirical support are summarized in table 12.

Table 12:

Summary of hypotheses and empirical results, study 1 and study 2

#	Prediction	Empirical result	Conclusion
H1	Prime congruence × Argument quality interaction on brand attitude	$F(1,133) = 9.8, p = .002$	Supported
H2	Prime congruence × Argument quality interaction on pos.-neg. cognitive response index	$F(1,133) = 1.4, n.s.$	Not supported
H3	$r_{\text{cog.responses, brand attitude in congruent condition}} > r_{\text{cog.reponses, brand attitude in incongruent condition}}$	Fisher $z = 2.48, p < .01$	Supported
H4	$r_{\text{brand attitude, purchase intention in congruent condition}} > r_{\text{brand attitude, purchase intention in incongruent condition}}$	Fisher $z = 1.81, p < .04$	Supported
H5	Prime congruence × time of measurement interaction on attitude resistance	$F(1,177) = 8.73, p < .005$	Supported
H6	Prime congruence × time of measurement interaction on attitude confidence resistance	$F(1,177) = 9.26, p < .005$	Supported

## 6.2 Limitations and future research

Although the results from the two studies were primarily supportive of the main theoretical predictions, some other factors deserve discussion in relation to the obtained results.

### 6.2.1 The prime and prime target

**Prime target ambiguity.** The current studies chose to apply a rather concrete, functionally oriented advertisement as a prime target. This choice is somewhat different from previous practice and reasoning in the priming literature. Following the priming literature, prime-driven perceptions are most likely to appear when the target stimulus is ambiguous. However, exactly how ambiguous a target stimulus would have to be is not clear. The impression left from Yi's (1990a,b, 1993) studies of contextual priming in advertising, is that the advertisement following a prime need to be ambiguous for priming effects to occur, but ambiguity is not manipulated in Yi's work. Ambiguity is apparently conceived of as a characteristic of the target that opens up for multiple interpretations of the target (see e.g., Empson 1930, Hoch 2003). In other words, when there are multiple possible interpretations of a target stimulus, participants are more likely to make an interpretation in direction of the prime. It is likely that advertisements will vary in ambiguity; some are very descriptive and factual, while other may portray pictures and textual elements encouraging multiple

interpretations. Does this rule out the effects obtained in the current studies as priming effects?

One might expect (at least) two effects to operate based on target stimulus' level of ambiguity. First, for highly ambiguous target stimuli, a main-effect of primed representation is likely to occur. For example, consider two primes used in the current studies, one priming functional consumption behavior, and the other priming experiential consumption behavior. If the target advertisement was high in ambiguity, participants primed with functional consumption could interpret the advertisement in that manner, whereas the other subject group would use the experiential consumption prime as a reference. Thus, both primes would be equally effective in biasing advertisement processing in direction of the prime. Put differently, if the prime target had this level of ambiguity, the notion of prime congruence would be nonsensical, as both primes would produce congruence.

Admittedly, advertisements with few verbal elements, or slogans or visual elements made deliberately to open up for many interpretations, could experience this effect. In those cases, both primes might be said to be equally effective in biasing perceptions of the advertisement, but it could also be the case that only one of these biases was the one sought for by the advertiser.

Second, what if the advertisement was less ambiguous as in the current studies? Then we might expect that of two primes, only one might appear relevant to the advertisement. More precisely, both primes activate memory content, but only one type of memory content has clear relevance for the advertisement. An irrelevant prime could show less effect, or actually work directly against the message of that advertisement, because activated memory content is incongruent with the advertisement. A relevant prime could on the other hand strengthen the interpretation and perception of the advertisement. Returning to the functional vs. experiential prime manipulation adopted in the current studies, if the advertisement was clearly communicating functional product attributes, the functional prime would be the more relevant one if it activates the functional consumption associations of the customer. If it through its occurrence in the immediate context surrounding the advertisement leads to more elaboration and a more favorable attitude than the other prime would have done, we would still have a priming effect, despite the target's low level of ambiguity. This is what we observed in study 1 and study 2.

Hence, it seems to be limited reason to argue that a stimulus following a prime should be ambiguous for priming effects to occur. The less ambiguous, the more the relevance vs. irrelevance of the preceding prime would have to say for different effects. The more

ambiguous target, the more we might experience biasing effects in direction of the primed representations, simply because different memory contents are equally applicable. Future research would benefit from manipulating prime target ambiguity to test the potential different priming effects associated with target ambiguity.

Examining other types of congruence between prime and prime target: The potential bases for congruence could be close to indefinite, and much remains to be investigated with respect to the concept of congruence itself, what is creating perceptions of congruence, and what are the potential effects of congruence between advertisements and their contexts. The current studies established congruence between prime and advertisement content for functionally oriented primes and prime target (i.e., an explicit congruence vs. incongruence manipulation). However, incongruence is given with respect to either prime content or prime target content – and is ultimately defined through the eyes of the beholder. Future research could introduce manipulations of both functional and experiential brand advertisements in response to the functional and experiential editorial context (c.f., Lavine and Snyder, 1996). That could enable a test of the elaborative capacity of different bases of congruence frequently appearing in newspapers, magazines, etc.

One could also envision editorial context priming either happy or sad moods (e.g., Howard and Barry, 1994) – however, few advertisements would aim to be sad in content, but they might nevertheless in themselves trigger sad moods like feelings of guilt, negative body image, etc. Another dimension could be to manipulate congruence by means of layout, i.e., visual congruence vs. verbal congruence. Both the prime and the prime target could vary on this visual – verbal dimension, however it poses a challenge to control for argument strength. In everyday life, companies will be likely to apply a mix of visual and verbal elements in their advertisements, and future research could manipulate congruence both visually and verbally. In the advertisements in the current studies, the pictorial element was held constant across conditions, and high verbal content was logical for a functionally oriented congruence approach. However, in attempts to manipulate congruence between editorial context and advertisements with a symbolic concept (c.f., Park, et al. 1986), one might have to downplay the verbal elements, and give more attention to the visual or pictorial elements of the prime target.

In addition, occurrences with partial congruence are likely. With partial congruence we mean that an advertisement might combine functional and/or experiential and/or symbolic positioning messages. The verbal element might be highly functional, whereas the pictorial

elements might be highly symbolic, or verbal arguments might be both functional and/or symbolic etc. Attempts have been made to investigate this without clear results (e.g., Agres, 1990; Lavine and Snyder, 1996). The construction of pure (uni-directed) vs. combined advertisements will be difficult, at least when it comes to keeping the pure vs. combined advertisements comparable. Given pure advertisements with 6 bullet-points with product attributes in each of the functional vs. experiential oriented advertisements, it would be hard to decide which arguments to select for the combined version, given a goal of keeping the amount of information equal in pure vs. combined advertisements, additionally one would also have to counterbalance the sequence of functional vs. experiential ad claims.

Finally, both study 1 and 2 were framed as occurring in an Internet context. However, a quick glance at the stimuli would suggest that they (at least the editorial stories) do not look too much like Internet solutions. Future studies might attempt to enhance the web-layout to correct for this, or might choose to conduct similar experiments in real paper versions of magazines (c.f., Moorman, et al. 2002). New ways to present advertisements on the Internet are invented rapidly, but more importantly, Internet gives the advertiser an opportunity to more precisely place their advertisements along with content of their desire. This is possible due to the frequent updates of internet-magazines and -newspapers. The same opportunity could enable field experiments to be conducted regarding the effect of editorial context (and vice versa) on elaboration of advertisements, and could be pursued in future research.

The effect of the context surrounding advertisements was the primary focus in both studies, and accordingly, participants in all conditions read a story in one or the other version prior to the advertisement. Thus, the designs of study 1 and 2 contained no control-group. The relative difference in effects based on level of congruence was our primary concern, but it might also be of interest to add a third level to the priming factor, turning it into a no prime vs. congruent prime vs. incongruent prime manipulation. It would not add in understanding the difference between prime congruence and incongruence explicitly. However, depending on the effect in a potential control group of study 1, it could give some indications as to what one learn from considering the effectiveness of advertisements seen in isolation, compared to effectiveness of advertisements occurring in a context (as they naturally most often will do).

If the purpose of these future studies is to continue to investigate and delineate the elaborative consequences of congruence between advertising content and advertising context, caution should be taken to ensure that argument quality is perceived to be equally strong or weak across advertisement content.

### 6.2.2. Multiple roles of elaboration variables and the current studies.

Motivation to elaborate: Personal relevance is acknowledged as a key facilitator of elaboration (Petty and Cacioppo, 1986; Petty and Wegener, 1999, see also chapter 3). To what extent might the elaborative consequences of prime congruence be accounted for by personal relevance? Personal relevance was not manipulated in the current studies. This does not mean that personal relevance has to be situationally manipulated in order to address the effect, as evident from e.g., Haugtvedt and Petty (1994), Petty and Wegener (1998b), Petty, et al. (2000), and Wheeler (2001) and their practice of using personality traits or self-schemas as measures of personal relevance or elaboration likelihood.

If we assume that individuals will spend more time on message scrutiny when they are more involved in message processing, we should expect that congruently primed participants spent more time reading the advertisement compared to the incongruently primed participants. The results from study 1 showed no significant difference in time spent on reading either the prime or the advertisement between the two prime conditions, nor did time spent on reading the advertisement alter the predicted interaction between prime congruence and argument strength in study 1 when entered as a covariate. Although these measures are only proxies of involvement at best, they do not indicate clear differences in involvement or personal relevance between the two prime congruence conditions in study 1. In study 2, participants' level of involvement in the product category was statistically controlled through measurement. The results showed no difference in involvement in the product category between the two prime congruence conditions. Nor did we find any significant difference in time spent on reading the advertisement in study 2. As the studies entailed no explicit manipulation of personal relevance, we cannot conclude that this might not account for some of the elaborative effect of prime congruence. On the other hand, the measures seem to support our contention that personal relevance is too equal to account for the majority of the results.

Other studies of matching or congruence have as outlined earlier, matched or mismatched messages to characteristics of the attitude objects, the individual, the attitude function or -functions, etc. These practices are perhaps better described as producing matching or congruent conditions by priming more chronically accessible concepts, whereas the priming manipulation applied in the current studies is oriented towards temporary accessibility (c.f., Higgins, 1996). Future studies might repeat the studies reported here for individuals high vs. low in need for cognition (c.f., Petty and Wegener, 1998b; Wheeler,



2000), high vs. low in self-monitoring (c.f., Lavine and Snyder, 1996), high vs. low in need to evaluate (c.f., Jarvis and Petty, 1996), etc.

Ability to elaborate is the second key facilitator of elaboration (Petty and Cacioppo, 1986, Petty and Wegener, 1998a). Ability to elaborate has often been manipulated by introducing distraction tasks for the participant (see Petty and Wegener, 1998a for a review). One potential explanation of the elaborative capacity of prime congruence in current research is that participants in congruent conditions are better enabled to process information in embedded advertisements – as the content of these advertisements can be readily accommodated by congruent primes. We introduced no manipulations of ability to elaborate in the current studies. On the contrary, the pace of the experiments was completely under the control of each participant, they were free to spend the time they felt necessary. Future studies might consider introducing ability manipulations to better delineate this potential explanation.

Different roles for prime target advertisement congruence: The current studies focused on investigating the extent to which congruence served as a variable capable of increasing elaboration likelihood on its own, which is but one potential way a variable in the elaboration situation might exert its effect. One way worth commenting is congruence's capacity to bias processing.

This is most likely when elaboration likelihood is high, and would produce main-effect of congruence. In other words, when there is a match between the prime and the target, elaboration should go in favor of the prime, or impart a favorable bias to the ongoing information processing activity. Biased processing is most likely to occur when elaboration likelihood is high – i.e., when the recipient has motivation and or ability to reach a particular conclusion, or elaborate in a particular direction (Petty and Cacioppo, 1986; Petty and Wegener, 1999). Petty and Wegener (1998b), Lavine and Snyder (1996, footnote 2), and Petty et al. (2000) argue that biased processing is one possible explanation for the functional matching effect in persuasion. In particular, Lavine and Snyder (1996) suggested that when they found functional matching to invoke positive bias in message processing, it was likely that “processing motivation was relatively high” (p.600).

All else being equal, unless the prime itself initially increases ability to elaborate, it seems less likely that elaboration likelihood was sufficiently high to induce bias in the contextual prime situation. Seen in isolation, the prime itself could through the accessibility mechanism in the encoding stage, increase the elaboration likelihood, that is, the likelihood

that subsequent information will be interpreted in line with or assimilated in direction of the prime. Assimilation could result as a consequence of increasing prime-target congruity (Herr, 1986; Higgins, 1996). If there is a high degree of congruence, we might experience that elaboration of the information in the subsequent advertisement is assimilated into the cognitive schema triggered by the prime. The results of study 1 with higher correlation between cognitive responses and brand attitudes in congruent conditions might indicate an assimilative tendency. If on the other hand congruence is low, the primed information is not applicable, and the result should be neither assimilation nor contrast.

Could congruity also produce a biased contrast effect? It could be the case that if the prime is too blatantly administered, the recipient could adjust for the potential influence of the prime, and elaborate in opposite to the prime – thereby producing a counter-biasing effect (Bargh and Chartrand, 2000). In this case, the unawareness of the prime's influence assumption of priming effects would to some extent have been violated.

The current studies utilized a fake brand, so no particular reason to draw a specific conclusion seem prominent – at least it is not likely that motivation to reach a particular conclusion should be especially higher for congruently primed participants compared to incongruently primed participants. As the participants in the two prime conditions spent equal amount of time reading the advertisement in both studies, and involvement was equal across prime conditions in study 2, we do not find strong evidence of prime congruence serving to bias elaboration.

However, could prime congruence have served as a peripheral cue in the current studies? The cue explanation is viable in low-elaboration conditions. It presupposes that when the recipient neither has the motivation, nor the ability to elaborate, the persuasion variable will affect elaborative outcome through a low-elaborative process like e.g., simple inference, heuristics etc (Petty and Cacioppo 1986; Petty and Wegener 1999).

Under the cue-explanation we could encounter assimilation and contrast effects. If the prime itself has no effect on elaboration likelihood, higher levels of congruence should make assimilation increasingly likely, and easy. However, the subsequent judgment would not be a result of elaboration, meaning that under the cue explanation, we would expect no differences in indicators of attitude strength between the two prime conditions. The correlational results in study 1, and the attitude resistance and attitude confidence resistance results of study 2 do show differences in attitude strength between the two prime conditions. Consequently, the cue-based explanation of congruence seems less likely compared with the enhanced message scrutiny explanation. Future research might pursue a more explicit test of the biased and cue-

based explanations of prime congruence. For example, customers are frequently bombarded with advertisements for both new and existing brands, brands they know from own experience, or not. Based on level of experience with a particular brand, effects to prime congruence might be different (c.f., Yi, 1993). Evidently, there are many research opportunities left to investigate in order to gain a better understanding of the effect of advertising context on advertising effectiveness.

## **6.3 Theoretical and managerial contributions**

The purpose of any dissertation is to make contributions to existing knowledge. In the following two paragraphs, some of the theoretical and managerial contributions of the current studies are emphasized.

### **6.3.1 Theoretical contributions**

Priming and persuasion are heavily researched, with rich traditions both with respect to theory and methodology. This research contributes to both priming and persuasion theory through the following.

First, the priming literature has frequently shown that primed concepts are likely to influence subsequent perception (e.g., Bargh and Chartrand, 2000; Higgins 1996). Until now, the assumption has mainly been one of main-effects, i.e., that the higher the congruence between context and advertisement, the better (e.g., Yi 1990a,b). However, because no priming studies have manipulated the target advertisement's argument quality and/or gathered process measures, we did not know how primed concepts might interact with properties of the target advertisement in producing effects. In other words, we actually did not know if congruence in some circumstances prompts a level of scrutiny that might backfire on brand attitudes due to enhanced elaboration.

By manipulating the level of congruence between the editorial context, and the content of the advertisement, we gained the first insights into the process of elaboration that takes place when participants are being primed prior to the persuasive advertisement. The argument strength manipulation was crucial in detecting differences in elaboration across levels of prime congruence, a manipulation not previously employed in priming studies. The studies also showed that prime targets didn't need to be highly ambiguous for priming effects to occur.

Furthermore, the strength of primed brand attitudes has not been addressed in previous priming research. Through our second experiment, we demonstrated the extent to which

primed brand attitudes were differentially resistant to counter arguments both with respect to decay in attitude extremity, and confidence of the attitudinal response, were different across levels of prime congruence, thus adding to existing knowledge about priming effects and persuasion. Additionally, the strength of attack manipulation showed that level of congruence had attitude strength effects for both weak and strong attacks.

The persuasion literature has devoted less explicit attention to priming (c.f., Petty and Wegener, 1998a; Eagly and Chaiken, 1998). Hence, priming has not been integrated with persuasion theory. Through this dissertation project, an effort has been made to start filling this gap. The assumed critical qualifier in the priming literature was the extent to which the consumer was aware of the influence a priming attempt has on his or her subsequent attitude (Bargh and Chartrand, 2000). By showing that the priming process indeed affected elaboration of persuasive messages and attitude strength, this represents a significant contribution to existing knowledge of how context affects persuasion.

### 6.3.2 Managerial contribution

Advertising plays an important role in most brand building efforts. The current studies show that advertisements' effectiveness in producing strong brand attitudes cannot be fully assessed without considering the context in which the advertisements appear. A brand manager would typically have to consider where to place advertisements in order to obtain maximum effect in a target market. Compared to costs of developing advertisements, their placement costs can be substantial. Placed in the wrong context both with respect to which media, and where within that medium, advertising dollars would be wasted. The main contribution of managerial relevance from this dissertation pertains to the advertisement placing strategy applied to a brand-building frame of reference.

Brand managers will benefit from being advised on how they might use context to increase likelihood that their ads are processed as extensively as intended and therefore be more successful in helping the brand achieve and maintain its intended position. They should also be aware that as advertising context affects extent of scrutiny given to arguments presented in the advertisement, they might benefit from testing the perceived strength of arguments explicitly. In early stage of ad-copy development, it should be a manageable task to conduct such tests.

To be effective, the advertisement has to be noticed, attended to, and hopefully elaborated upon to obtain a strong, favorable and unique position in consumers' minds (Keller 1993; 2003). The results of study 1 and 2 clearly points out that even if an advertised brand is

equally well evaluated at initial ad-exposure, the strength of the attitudes can be different depending on the elaboration prompted by the level of congruence between ad-context and ad-content. This project provides insights into how advertising context can be utilized as a means to facilitate stronger brand attitudes.

Additionally, advertising testing procedures might become more accurate when context is also considered. At present, test panels (e.g., focus-groups) are normally exposed to the advertisements isolated from the media in which they occur, and from the specific content preceding the advertisements (be that feature stories or other advertisements). This may lead to inefficient decisions about the content of the advertisement itself, and the proper placing.

Furthermore, media brokers will also benefit from enhanced knowledge of context effects. They may provide better advice to the advertisers, and thereby increase the advertisement's value for the advertiser.

Finally, the owners of the media themselves might obtain a competitive edge if they are able to match context and advertisements. Particularly, a content-based placement strategy will require more collaboration between the advertiser, the media broker, and the media owner to obtain an optimal fit between context and advertisements. Where you previously paid for the space of the advertisement itself, we might experience a shift where pages facing and following the advertisement are bought and filled with appropriate editorial content in order to obtain the best control for context effects. In the most flexible current medium, the Internet, you may today experience that advertisers place their advertisements as banners on the most appropriate web pages. If technology allows this flexibility, this could also be the future for off-line (i.e., print) media.

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# APPENDIX 1: PREVIOUS RESEARCH OF CONTEXTUAL PRIMING IN ADVERTISING SETTINGS

Study	Research question and hypotheses	Prime target	Design and priming manipulations	Dependent variable(s)	Process-measures	Results
Coulter and Sewall (1995)	<p><b>H1:</b> High editorial involvement will result in less favourable Aad and Ab (and vice versa).</p> <p><b>H2:</b> Cognitive priming will moderate effect of context involvement on Aad and Ab</p> <p><b>H3:</b> Affective consistency between tone of ad and article interact with editorial context involvement on attitude toward ad</p>	Product attribute (car) Affect (humour)	<p><b>Study 1:</b> 3(cognitive priming: positive, negative, neutral) x 2(context involvement: high, low) between subjects factorial design</p> <p><b>Study 2:</b> 2(affective consistency: high, low) x 2(context involvement: high, low) x 2 (ad involvement: high, low)</p>	Attitude toward advertisement and brand	Only as manipulation checks	<p>H1: support for Aad</p> <p>H2: no priming effects on Aad, support for two way interaction between cognitive priming and involvement for Ab</p> <p>H3: no support</p>
Hadjimarou, Barnes and Jacobs (1996)	Effect of online and information-based processing (immediate and delayed) after mood priming	Mood	Mood primed in ostensibly unrelated experiment	Aobject, global evaluation of the product, purchase intentions	No process measures,	Primed affective states influence initial product evaluations, but did not affect repeat product evaluations
Howard and Barry (1994)	The effect of thematic congruence between a mood-inducing event and an advertised product on brand attitudes	Mood	<p><b>Study 1:</b> 3(mood: positive, neutral with story, neutral without story) x 2(product: athletic shoe, casual shoe) x 2(argument quality: strong, weak)</p> <p><b>Study 2:</b> 2(mood: positive, neutral) x 2(thematic congruence: congruent vs. incongruent) x 2(argument quality: strong, weak)</p>	Brand attitude	Net and total message related thoughts	<p>Study 1: thematic congruence facilitates processing in positive mood conditions, vice versa for incongruent condition</p> <p>Study 2: positive mood facilitates processing in congruent condition, and vice versa in incongruent condition</p>
Moorman, Neijens, and Smit (2002)	<p>RQ1: What are the effects of magazine-induced psych.responses on ad.memory and attitude toward ad</p> <p>RQ2: What is the effect of thematic congruence between ad and magazine on memory and attitude toward ad</p>	Congruence as match between style of magazine (not content), and type of product	Three different magazines, the three ads placed randomly in all three magazines gave conditions with varying levels of congruence. Note no content congruence, rather style congruence condition	Psych.responses: - liking - involvement - feelings Ad recognition Attitude toward ad	None	<p>- Magazines induce positive affect and involvement</p> <p>- Thematically congruent ads were sign.more recognized than incongruent ads</p> <p>- no main or interaction effect of thematic congruence on attitude toward ad</p>

Appendix 1, cont.

Study	Research question and hypotheses	Prime target	Design and priming manipulations	Dependent variable(s)	Process-measures	Results
Pelsmacker, Geuens, and Anckaert (2002)	<b>H1:</b> Effect of advertising shown in congruent vs. incongruent ad-context is dependent on recipient level of categ.involvement <b>H2:</b> ads embedded in positive (negative) contexts are more positively (negatively) evaluated, and vice versa for ad content and brand charact.	In print context: fake magazines with articles and photos priming one of either: Humorous Warm feeling Rational, establishing three different types of ad-style / context style congruence	Fake magazines and ads for existing brands. Involvement was measured, not manipulated as an independent variable	Attitude toward ad - likeability - informativeness - clarity Brand recall Ad content recall	To some extent: ad content recall, although not categorized or analysed in terms of type and amount of processing	- context/ad congruity showed no significant main effects on Aad. - Involv.* congruity sign. for clarity and likeability  Concludes that congruence in low (high) condition has no effects on elaboration. However, extent of elaboration is based on measures of recall and informativeness
Schmitt (1994)	<b>H1:</b> main effect of priming on evaluation of ad <b>H2:</b> pos (neg) image primes will result in pos (neg) cognitive responses to the ad	Exp.1: personal values Exp.2: image	<b>Exp.1:</b> personal or social values primed – ambiguous target picture <b>Exp.2:</b> positive, negative primes (word-object combination task), control group saw non-image related terms	Exp.1: cognitive responses to advertising stimuli Exp.2: extremity of cognitive responses and ad-likeability	Cognitive responses coded in terms of coherence with prime (exp.1) and coherence with pos (neg) primes (exp.2)	Study 1: main effect: primed values influence interpretation of ambiguous picture Study 2: main effects on response extremity, ad attitude, and ad slogan attitude
Yi (1990a)	<b>H1:</b> an ad-context priming specific attributes can either have a positive or negative effect on the evaluation of the advertised message by altering the way ambiguous product information in an ad is interpreted	A particular PC attribute in the subject's PC product category memory	'Priming' ads used to prime either versatility or ease of use of a computer (not target computer). In other words, prime and target ad were in the same product category	Brand attitude and purchase intentions	Listings of thoughts about pc-characteristics they might consider if they where to buy a PC. <b>Not</b> related to the target ad	Study 1: Main effect of prime on brand attitude, order of mention, and frequency of mention. Study 2: similar main effects of prime on brand attitude
Yi (1990b)	<b>H1:</b> cognitive priming of positive implications of an attribute will enhance brand evaluations, cognitive priming of negative implications of an attribute will decrease brand evaluation <b>H2:</b> positive prime induced affect will enhance attitude toward adv.	Car as product category in subject's memory	2(cognitive prime: safety, fuel economy) x 2(affective tone of context: positive, negative) factorial design Subsequent car ad emphasized "large size of car"	Attitude toward brand and advertisement, and purchase intentions	Similar to Yi 1990a, analysed with respect to frequency of mention, and order of mention. <b>Not</b> related to target ad	Significant main-effects of cognitive prime on att.brand, and PI (supports H1) Significant main-effect of affective prime on att.advertisement (supports H2). No significant interactions

Appendix 1, cont.

Study	Research question and hypotheses	Prime target	Design and priming manipulations	Dependent variable(s)	Process-measures	Results
Yi (1993)	<b>H:</b> Contextual priming effects on brand attitudes and purchase intentions will be pronounced among customers with moderate product class knowledge, and sharply diminish among consumers with low or high knowledge	as Yi 1990a	2 (contextual priming: safety, fuel economy) x 3 (prior knowledge: low, medium, high) between subjects factorial design	Attitude toward brand and advertisement, and purchase intentions	as Yi 1990a	Support for hypothesized moderating role of knowledge: only contextual priming effects for moderately knowledgeable participants

## APPENDIX 2: STIMULI USED IN STUDY 1 AND 2

Many newspapers and magazines now have online versions of their publications. While free of charge, the online versions typically have many different formats and contain advertisements on the same pages as the stories.

Some newspapers and magazines are considering the development of online versions that do not contain advertisements, or only a very limited amount of advertisements. These versions could be available by subscription. Because little is known about consumer reactions to different online formats (e.g., should the ad-free version look the same as the print versions?), we are conducting this study.

On the following page you will read an example of a possible format. After viewing the page, you will be asked to provide your opinions about the layout.

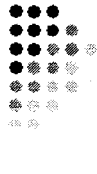
Please read the story carefully and take your time.

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*Press "spacebar" when you are ready to continue*

Prime cover story

Many companies are uncertain about how information about their brands should be presented. To day, information about brands seems to drown in other types of information, e.g., banner-ads etc.



We will ask you to evaluate one brand for a company who considers to present their brand in full-screen format. The presentation you are about to see is not completely readymade copy, so you should not attend too much to ad execution. The picture is only illustrative.

Your task will be to provide overall assessment of the brand, and the way it is presented. You should consider the informative value of the presentation. You will also be asked to provide some judgments about the product categories this brand compete in.

As you will observe, there is no information about price in the presentation. This is due to the fact that the brand is not yet launched. However, you should assume that the price would be reasonable compared to competing brands of same quality in the category.

*Hit "spacebar" when you are ready to continue!*

Cover story before advertisement exposure

<p>VALUE</p> <p>QUALITY</p> <p>USEFULNESS</p> <p>FUNCTIONALITY</p> <p>PRACTICAL</p> <p>EFFECTIVE</p> <p>EFFICIENT</p> <p>DURABILITY</p>	<p><b>Businesses realize that to please young customers, these qualities are required of their brands</b></p> <hr/> <p><input type="checkbox"/> In a recent survey of 2 000 undergraduates at three major universities, respondents claimed that they were getting more concerned with functional qualities of products, and that they look for "value for money" in their purchases. The Internet is supporting this trend, with search engines making price comparisons easier. Says Sara, 22 years old: <i>"I am paying more attention to the benefits or value I get for the money I spend. I guess it's because I have a tight student budget"</i>. The study shows that there are many others like her.</p> <p><input type="checkbox"/> Businesses are recognizing these trends by putting more effort into advertising where they try to convince consumers that their brands are "the best buy", a "value-deal", or "more for less." Quality and value-seeking consumers mean intensified competition in many categories. In the end, the consumer benefits. The new generation has shown businesses that they will not be fooled by ads that tell them that happiness lies in the brands they wear or use.</p> <p style="text-align: center;"><i>Press spacebar to move ahead!</i></p>
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Congruent prime story study 1 and 2

<p>PLEASANT</p> <p>INTERESTING</p> <p>AMUSING</p> <p>VARIETY</p> <p>ENJOYABLE</p> <p>SUITABLE</p> <p>PLEASURABLE</p> <p>FUN</p>	<p><b>Businesses realize that to please young customers, these qualities are required of their brands</b></p> <hr/> <p><input type="checkbox"/> In a recent survey of 2000 undergraduates at three major universities, respondents claimed that they would pay more attention to other things than work and career after graduation. Says Sara, 22 years: <i>"I do not want to spend my life working 60 hours a week. I'll work to live, not live to work"</i>. When out shopping, she looks for products that may provide pleasure, and she shows little brand loyalty. This is a new challenge for marketers. Most brands will have to provide a variety of things, because preferences will change rapidly.</p> <p><input type="checkbox"/> Businesses have tried to put labels on these young people, but they don't seem to apply very well. Some argue that Internet has changed the way young people think, feel, and behave as consumers. They want the easy way out, and they want to be pleased. When you lose the touch and feel of things on the internet, other things gain importance. The key-words in the left column shows this. Before they were secondary priorities. Today, they are top priorities.</p> <p style="text-align: center;"><i>Press spacebar to move ahead!</i></p>
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Incongruent prime story study 1 and 2


The New Vital Essence Shampoo - Microsoft Internet Explorer

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# The New Vital Essence Shampoo

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The New Vital Essence Shampoo – healthy hair the healthy way

- A new brand of hair shampoo has just been developed. In tests, over half of the people who tried Vital Essence thought that it cleaned their hair better than the shampoo they used at home.
- Vital Essence's all-natural ingredients provide your hair with optimal protection against sun and pollution damage, while preventing dandruff and hair loss.
- Provides essential vitamins for healthy hair and skin.
- The Vital Essence Shampoo is available in a variety of sizes, and unique formulas for different hair types.
- With containers made of environmental-friendly and recyclable material and natural ingredients, you will not harm the environment.
- Vital Essence shampoo will be available at your hairdresser, to make sure you get the right one for you and your hair.

*Press spacebar to move ahead!*

Done My Computer

Advertisement strong argument condition study 1 and 2


The New Vital Essence Shampoo - Microsoft Internet Explorer

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# The New Vital Essence Shampoo

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The New Vital Essence Shampoo – Hair care for everyone – every time

- A new brand of hair shampoo has just been developed. In the pretests, half the people who tried Vital Essence felt it cleaned their hair as good as the shampoo they used at home, as long as they stayed out of rain and wind.
- This is due to the new scientific formula with synthetic silicone. It will reduce some types of dandruff, and will not harm your scalp if you don't use it more than three times a week.
- The synthetic silicone formula provides a shell around hair, making the hair easily manageable.
- This shampoo is clearly a good substitute for all the shampoos you have previously used.
- It comes in three different sizes, and the formula works with most types of hair.
- Vital Essence Shampoo will soon arrive at a supermarket near you.

*Press spacebar to move ahead!*

Done My Computer

Advertisement weak argument condition study 1

Because of concern for their readers, the online newspaper wants to make sure they are promoting high-quality products. Therefore, newspaper staff pre-tested the shampoo for a few weeks before launch.

A summary of their judgments shows the following:

- On a ten point satisfaction scale (ten being best), the average rating of the shampoo was only 3
- More than half of the staff said it made their hair feel more coarse
- 15 % said they experienced increased dandruff problems
- 75 % said they would rather stick to the shampoo they used before

Press "spacebar" to move ahead

Strong counterargument message used in study 2

Because of concern for their readers, the online newspaper wants to make sure they are promoting high-quality products. Therefore, newspaper staff pre-tested the shampoo for a few weeks before launch.

A summary of their judgments shows the following:

- On a ten point satisfaction scale (ten being best), the average rating of the shampoo was 6
- Many reported that the shampoo bottle was a bit slippery when wet
- Some did not like the color of the shampoo, and
- Some people did not like the scent of the shampoo

Press "spacebar" to move ahead

Weak counterargument message used in study 2



## APPENDIX 3: MEASUREMENT ITEMS USED IN THE STUDIES

### Need for evaluation (Jarvis and Petty, 1996)

- neval1 I form opinions about everything
  - neval2 I prefer to avoid taking extreme positions
  - neavl3 It is very important for me to hold strong opinions
  - neval4 I know exactly what is good and bad about everything
  - neval5 I often prefer to remain neutral about complex issues
  - neval6 If something goes not affect me, I do not usually determine whether it is good or bad
  - neval7 I enjoy strongly liking and disliking new things
  - neval8 There are many things for which I do not have a preference
  - neval9 It bothers me to remain neutral
  - neval10 I like to have strong opinions even when I am not personally involved
  - neval11 I have more opinions than the average person
  - neval12 I would rather have a strong opinion, than no opinion at all
  - neval13 I pay a lot of attention to whether things are good or bad
  - neval14 I only form strong opinions when I have to
  - neval15 I like to decide that new things are really good or really bad
  - neval16 I am pretty much indifferent to many important issues
- 7 point scale, 1 = extremely uncharacteristic of me, 4 = uncertain, 7 = extremely characteristic of me

### Need for cognition (Cacioppo, Petty, and Kao, 1984)

- ncog1 I prefer complex to simple problems
  - ncog2 I like to have the responsibility of handling a situation that requires a lot of thinking
  - ncog3 Thinking is not my idea of fun
  - ncog4 I would rather do something that requires little thought than something that is sure to challenge my thinking abilities
  - ncog5 I try to anticipate and avoid situations where there is a likely chance I will have to think in depth about something
  - ncog6 I find satisfaction in deliberating hard for long hours
  - ncog7 I only think as hard as I have to
  - ncog8 I prefer to think about small daily projects to long term ones
  - ncog9 I like tasks that require little thought once I have learned them
  - ncog10 The idea of relying on thought to make my way to the top appeals to me
  - ncog11 I really enjoy a task that involves coming up with new solutions to problems
  - ncog12 Learning new ways to think doesn't excite me very much
  - ncog13 I prefer my life to be filled with puzzles that I must solve
  - ncog14 The notion of thinking abstractly is appealing to me
  - ncog15 I would prefer a task that is intellectual, difficult, and more important to that is somewhat important but does not require much thought
  - ncog16 I feel relief rather than satisfaction after completing a task that required a lot of mental effort
  - ncog17 It's enough for me that something gets the job done; I don't care how it works
  - ncog18 I usually end up deliberating about issues even when they do not affect me personally
- 7-point scale, 1 = extremely uncharacteristic of me, 4 = uncertain, 7 = extremely characteristic of me

**Self-monitoring (Lennox and Wolfe, 1984)**

- sm1 In social situations, I have the ability to alter my behavior if I feel something else is called for
  - sm2 I have the ability to control the way I come across to people, depending on the impression I wish to give them
  - sm3 When I feel that the image I am portraying isn't working, I can readily change to something that does
  - sm4 I have trouble changing my behavior to suit different people in different situations
  - sm5 I have found that I can adjust my behavior to meet the requirements of any situation I find myself in
  - sm6 Even when it might be to my advantage, I have difficulty putting up a good front
  - sm7 Once I know what the situation calls for, it's easy for me to regulate my actions accordingly
  - sm8 I am often able to read people's true emotions correctly from their eyes
  - sm9 In conversations, I am sensitive to even the slightest change in the facial expression of the person I am conversing with
  - sm10 My powers of intuition are quite good when it comes to understanding others' emotions and motives
  - sm11 I can usually tell when others consider a joke to be in bad taste, even though they may laugh convincingly
  - sm12 I can usually tell when I've said something inappropriate by reading it in the listener's eyes
  - sm13 If someone is lying to me, I usually know at once from a person's manner of expression
- 7-point scale, 1 = never true, 4 = neutral, 7 = always true

**Propensity to self-reference (Haugtvedt, 1994, Shakarchi and Haugtvedt, 2004)**

- nsr1 I find that thinking back to my own experiences always helps me understand things better in new and unfamiliar situations
  - nsr2 I think it is easier to learn anything if only we can relate it to ourselves and our experiences
  - nsr3 When I read stories, I am often reminded of my own experiences in similar circumstances
  - nsr4 I often find myself use past experiences to help me remember new information
  - nsr5 I think it is easier to evaluate anything if only we can relate it to ourselves and our experiences
  - nsr6 I always think about how things around me affect me
  - nsr7 In casual conversations, I find that I frequently think about my own experience as other people describe theirs
  - nsr8 When explaining ideas or concepts to other people, I find that I always use my own experiences as examples
- 7-point scale, 1 = extremely uncharacteristic of me, 4 = uncertain, 7 = extremely characteristic of me

**Attitude toward the brand study 1, pre attack study 2 (Haugtvedt and Petty, 1992; Yi, 1990)**

Instruction: To what extent did you find the shampoo brand

	1	2	3	4	5	6	7
brat1	Bad						Good
brat2	Negative						Positive
brat3	Unfavorable						Favorable

**Attitude toward the brand post attack study 2**

Instruction: Now that you have read the test results, we would like to know how you feel about the product. Your feelings might be more positive, less positive, or unchanged.

	To what extent did you find the shampoo brand						
	1	2	3	4	5	6	7
brat1_2	Bad						Good
brat2_2	Negative						Positive
brat3_2	Unfavorable						Favorable

**Attitude toward the advertisement study 1, pre attack study 2 (Aylesworth and MacKenzie, 1998; MacKenzie and Spreng, 1992)**

**Instruction** Now we want you to consider the advertisement itself, not the brand. Please click the number that best describes your judgment of the advertisement.

	1	2	3	4	5	6	7
atad1	Bad						Good
atad2	Dislike						Like
atad3	Unfavorable						Favorable

**Attitude toward the advertisement post attack study 2**

**Instruction** Now we want you to consider the advertisement itself, not the brand. After having read about the experiences reported by the brand users, we want you to click the number that best describes your judgment of the advertisement.

	1	2	3	4	5	6	7
atad1_2	Bad						Good
atad2_2	Dislike						Like
atad3_2	Unfavorable						Favorable

**Category Involvement (Laurent and Kapferer, 1985; Mittal and Lee, 1988)**

- involv1 I tend to care a lot about what shampoo I use  
 involv2 I think you run a big risk if you choose a shampoo that is inappropriate for your hair  
 involv3 The choice of shampoo is important to me  
 7-point scales, 1 = Strongly disagree, 7 = Strongly agree

**Purchase intention study 1, pre attack study 2**

What is the likelihood that you would purchase the advertised shampoo when it becomes available in the market?

	1	2	3	4	5	6	7
pint1	Not very likely						Very likely

**Purchase intention post attack study 2**

After having read the about the experiences reported by brand users, we want you to click the number that best describes the likelihood that you would purchase the advertised shampoo when it becomes available in the market?

	1	2	3	4	5	6	7
pint1_2	Not very likely						Very likely

**Attitude confidence pre attack study 2**

atcon1 Please click the number that best characterizes how certain you are about the judgments you made about the shampoo.

7 point scale, 1 = Very uncertain, 7 = Very certain

atcon2 Please click the number that best characterizes how certain you are about the judgments you made about the shampoo.

7 point scale, 1 = Very unsecure, 7 = Very secure

atcon3 Please click the number that best characterizes how confident you feel about the judgments you made about the shampoo.

7 point scale, 1 = Very unconfident, 7 = Very confident

### Attitude confidence post attack study 2

atcon1\_2 Please click the number that best characterizes how certain you are about the judgments you expressed after having read the test results.

7 point scale, 1 = Very uncertain, 7 = Very certain

atcon2\_2 Please click the number that best characterizes how certain you are about the judgments you expressed after having read the test results.

7 point scale, 1 = Very unsecure, 7 = Very secure

atcon3\_2 Please click the number that best characterizes how confident you feel about the judgments you expressed after having read the test results.

7 point scale, 1 = Very unconfident, 7 = Very confident

### Manipulation checks

congruent Sara is very concerned about the functionality and quality of the things she buys  
prime

7 point scale, 1 = Strongly disagree, 7 = Strongly agree

incongruent Sara just goes for the stuff that pleases her, and lives for the joy of the moment  
prime

7 point scale, 1 = Strongly disagree, 7 = Strongly agree

argument Please click the number that best describes your judgment of the strength of the  
strength information in the advertisement

7 point scale, 1 = very weak, 7 = Very strong

attack To what extent did you find the test results to believable?  
believability

7 point scale, 1 = Not at all believable, 7 = Very believable