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AN INTEGRATIVE MODEL OF MARKET-RELATED NEGATIVE INFORMATION PROCESSING

DISSERTATION

Presented in Partial Fulfillment of the Requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohio State University

By

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*****

The Ohio State University

1996

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Dedicated to my parents
Reeta and Ved Prakash Dewan
ACKNOWLEDGEMENTS

I am indebted to a number of people who were instrumental in helping me in this endeavor. I am thankful to all of them.

I am deeply indebted to Bob Burnkrant for his guidance, understanding and support. As I look at the end of this program, I realize how much of an impact he has had on my thinking and my outlook towards research. He has always encouraged me to develop my own thinking, but was always there when I needed direction. From him I have learned how to conduct research; the value of theory and rigor in developing science; the ability to question and delve deeper; and clarity of thinking.

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And finally, to the Lord who has the most unusual ways of teaching us.
VITA

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CHAPTER I
INTRODUCTION

The impact of the negative information in the marketplace can be devastating -- resulting in major losses in revenue and market share. For instance, in November 1986, "60 Minutes" aimed a scathing report at the Audi 5000 relating to its sudden acceleration problem uncovered by the Consumer Safety Association. November 1986 saw a 52.2 percent decline in the sales from October, reflecting the dramatic effect of the "60 minutes" news story. The effect of the negative information was immediate and severe -- a 66.4 percent decline in submarket share within two years (Weinberger, Romeo & Piracha 1991). This is not surprising given the findings of a recent study conducted by DDB Needham Worldwide, Chicago, for public relations agency Porter/Novelli (April 1995). The study found that negative publicity and how the company handles it has a very important role to play in the consumers' buying decisions. In fact, four of the top five influences in consumer buying decisions were related to negative publicity (see Figure 1).
Top Five Influences in Consumer Buying Decisions

<table>
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<th>Percentage</th>
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<tr>
<td>Quality of the product</td>
<td>95%</td>
</tr>
<tr>
<td>How a company handles complaints</td>
<td>85%</td>
</tr>
<tr>
<td>How a company handles crisis when at fault</td>
<td>73%</td>
</tr>
<tr>
<td>Government challenge about product safety</td>
<td>60%</td>
</tr>
<tr>
<td>Accusations of illegal/unethical trading practices</td>
<td>59%</td>
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Figure 1: Results of a 1995 Survey Conducted by DDB Needham World Wide

Stories of negative publicity, are not uncommon in today's marketplace. Recently the makers of Advil pain reliever launched a stunning assault on market leader Tylenol by publishing an open letter from a patient who blames Tylenol for the liver failure that forced him to have an emergency transplant. US Air was attacked for its safety problems, the Intel Pentium processor was questioned for its computational accuracy and Chrysler MiniVans faced a recall relating to their rear lock safety problems. According to Richard Irvine, President of the Institute for Crisis Management, the focus of press coverage on such company related crises is expected to increase even further in the future, mainly due to increasing consumer activism and the enhanced government investigation of businesses and industries relating to questionable management practices (Irvine 1992).
Given the increasing amounts of negative information that consumers are exposed to, and the potential damage it can have on the company's reputation, market share, and profitability, it is extremely important to understand the following questions, so that companies can address negative publicity effectively: How do consumers process negative publicity information and react to it? What is the extent of its damage in terms of attitudes towards the brand, company reputation, and confidence in the brand? What factors determine the extent of the damage? And how should the companies respond to this negative information?

The purpose of this dissertation is to start a theory-based stream of research addressing these issues. In this dissertation we use and advocate a theory driven approach for the development of strategies to deal with negative publicity. Theory will be used to understand how consumers process negative information. Then based on this theoretical understanding, strategies will be proposed and tested.

The Literature

Negative information has been studied from two different perspectives: managerial and behavioral. We will discuss both of these perspectives in the following paragraphs.
The managerial research dealing with negative information has attempted to directly address the problem of negative publicity. However, since the study of negative publicity is still in a state of infancy, the thrust of the research at this point appears to be more prescriptive than theoretical, largely comprising of research reporting the best practices. There is very little attempt to draw from behavioral theory or to develop theoretical frameworks relating to negative publicity. Generally case studies have been used (e.g. Johnson 1992; Pearson & Mitroff 1993; Weinberger, Romeo and Piracha 1991) to arrive at conclusions about which strategies “work” and which “don't seem to work”. For instance Pearson and Mitroff (1993) present a framework for crisis management based on their study of some companies in crisis situations. Their recommendations comprise general strategic directions, e.g., "Integrate crisis management into strategic planning process", "Provide training and workshops in crisis management". In another study, Johnson (1992) recommends the use of a seasoned spokesperson when companies face crisis situations. This is based on his observation of Chrysler Corporation’s handling of the odometer tampering scandal. Chrysler had very effectively used Lee Iacocca as the spokesperson. Occasionally experiments have been used to examine the relative effectiveness of response strategies that are currently popular with companies (e.g. Siomkos and Shrivastava 1993).
An interesting similarity in most of this work is that researchers almost always propose a single dominant strategy for the entire market. The case studies also show that most companies have used a "mass" approach when faced with a crisis situation (e.g., Weinberger, Romeo & Piracha 1991). The underlying assumption thus, appears to be that all consumers react to and process negative information in a similar manner (e.g., see Frank, Massy & Wind 1972). This is not surprising, given that this literature has focused on company responses, without giving any consideration to how consumers process this information. The issues of targeting and segmentation arise only when we consider response differences among consumers (e.g., see Allenby & Ginter 1995), because segmentation is based on identifying and responding to these differences. We will question the "homogeneity of response" assumption in our research and identify variables that moderate consumers' response to negative information.

In contrast to the managerial research, the behavioral research has not directly dealt with the issue of negative publicity. Research has tended to focus on how people react to negative information in social situations. There are two major streams of behavioral research: impression formation and fear appeals. Impression formation research has focussed on how people combine multiple pieces of information about unknown others to form overall evaluations. The negativity bias, i.e., greater weighting of negative as compared to positive information in the formation of overall evaluations
(e.g. Kanouse and Hanson 1972; Fiske 1980), is a robust finding in this literature. However, the research paradigm used in this work is very different from the real life publicity setting. In the impression formation studies, subjects are typically given multiple traits or behaviors of a hypothetical target person, and are asked to form an impression of the target on the basis of this information. In the market setting, consumers who have prior knowledge and pre-existing attitudes related to the target product, are faced with one new piece of information (either positive or negative). Thus the information integration task in this situation is very different from the one imposed in the impression formation paradigm. Whether and under what conditions the findings from the impression formation literature may be applied to research on publicity effects will be addressed in this dissertation.

The fear appeals research in the psychology and communications literature (e.g. Rogers 1975; 1983) also deals with negative information. In this literature, message recipients are exposed to negative information, specifically the negative consequences of performing the target behavior. The intent of the message is to persuade the subjects to change their behavior. Contrary to the findings of the impression formation literature, research on fear appeals shows that negative information is often ineffective in changing attitudes (e.g. Janis & Feshbach 1953; Kohn, Goodstadt, Cook, Sheppard & Chan 1982). The inconsistencies in the two streams of literature, with respect to the impact of negative
information, are very interesting. They seem to indicate that negative information may not always be very damaging.

However, the differences in assumptions, stimuli, and procedures between impression formation and fear appeals literatures are large enough to make any one stream of literature of limited use in understanding the impact of negative information on consumer attitudes. What is needed, therefore, is an integrated framework that can account for the findings and the inconsistencies in both these areas and offer insights into consumers' processing of negative information.

Approach of the Dissertation

In our research, we advocate and demonstrate a theory driven approach to address a managerial problem. The research is divided into two phases. In the first phase of the research, we take a step back from the problem domain, and examine the relevant theoretical literature for insights. Based on a review of the existing theory, and an identification of inconsistencies, and/or omissions, we build upon and advance the theory in the domain of interest. Empirical testing of the proposed theory is conducted. In the second phase, we return to the problem domain. Based upon our theory development as well as review of the existing literature, managerial strategies or company interventions are derived and empirically tested in the second phase of this research. In essence, we
adopt a full cycle approach to research. As demonstrated in Figure 2 we start in the substantive or problem domain, and go to the theoretical domain to understand the problem better. Once we have developed a theoretical understanding of the problem at hand, we then use this theory to make predictions in the substantive domain (e.g. derive company response strategies), and therefore, complete the cycle we began.

Figure 2: The Research Approach of this Dissertation.
Focus of the Dissertation

In the first phase of this research, based on the inconsistent findings of the two behavioral streams of research, we identify commitment as the moderator of the impact of negative information on consumers. We argue that high commitment consumers (consistent with the fear appeals literature) will resist the negative information, whereas, the low commitment consumers (consistent with the impression formation research) will weight the negative information heavily in the formation of overall evaluations. A lab experiment was conducted to test our hypotheses. Real brands were used and commitment of the consumers towards the target brand was measured. Process measures such as cognitive responses were used in the study to shed light on the process by which negative information affects consumer attitudes towards a product.

We provide a theoretical framework for understanding negative information processing which can be used for further research on this topic. We identify exceptions to the well established negativity effect: and in fact, find the opposite -- a positivity effect (greater weighting of positive information compared to negative information) with the high commitment consumers. Our research opens up a series of new questions: Are these effects persistent over time, or do changes occur as time passes by (given differential weighting of negative and positive information in the past as opposed to present)?
Since, the two groups of consumers process negative information differentially, in the second phase of this research, we propose different response strategies for each group, instead of the mass approach. This part of the dissertation focuses on examining the relative effectiveness of different response strategies for the two groups of consumers, based on how they process the negative information. A second experiment was conducted to test the proposed hypotheses.
CHAPTER II
LITERATURE REVIEW

In this chapter, we will review the literature dealing with negative information from a behavioral perspective. Two streams of research, one dealing with impression formation and another dealing with fear appeals will be reviewed. Following the review, the implications for consumer reactions to negative publicity information will be presented.

Impression Formation

The focus of this literature has been on understanding how people form impressions of others: finding simple parsimonious rules by which people combine and utilize information about others, and understanding the biases that occur in this person perception process. In these experiments, subjects are typically exposed to behaviors or adjectives that describe the target person and then asked to form an overall evaluation of the person of the basis of this information.

Early research (in the 1950's and 1960's) in the area of impression formation propagated and extensively tested an equal-weight averaging model in which the final
impression of a target is presumed to approximate a mathematical average of the component stimuli. For example, if a person described as sad were given a rating of -5 on a +10 (likeable) to -10 (dislikeable) scale and if a person described as industrious were given a rating of 7, then a person described as sad and industrious should be given a rating of +2.

However, Norman Anderson (Anderson 1965, 1974, 1981), in his research on impression formation, found that highly polarized negative adjectives appeared to lower the overall evaluation more than would be predicted on the basis of either the adding or the averaging model, what later came to be termed as a negativity bias. Anderson (1965) had subjects rate how much they personally would like a person characterized by a set of personality-trait adjectives. The particular adjectives used were chosen from among 555 personality trait adjectives that "had been previously rated from 0 to 6". Using these ratings, Anderson made up lists of four kinds of adjectives, chosen so that the positive and negative adjectives were equidistant from the neutral point of the scale: highly positive (H), moderately positive (M+), moderately negative (M-) and highly negative (L). Anderson then formed combinations (sets of twos and fours) of these adjectives which were administered to the subjects. All the combinations used adjectives of the same sign. His results indicated that the mean ratings of the negative sets (e.g., a set of two: L L) were further from the neutral point than the mean ratings of the corresponding
positive sets (e.g., a set of two: $H H$). Negative adjectives thus seemed more powerful than positive adjectives in affecting the overall evaluation. For the mixed set of adjectives (where highly polarized adjectives were combined with less polarized adjectives of the same sign), Anderson notes that both the averaging and the adding model predict that the mean evaluations should lie midway between the evaluations of the corresponding homogeneous sets. However, his results showed that for the positive adjectives (e.g. $H M^+$) this seemed to be the case, but not for the negative (L M-). The evaluation of the negative set was below its expected value. Anderson, thus, concluded that highly polarized negative adjectives appear to lower the overall evaluation more than would be predicted on the basis of either the adding or the averaging model.

A similar phenomenon emerged in a study by Feldman (1966). Feldman had subjects rate each of 25 adjectives on a 9 point bad-good scale. Each subject also rated 175 of the 625 the possible the two adjective combinations. By comparing the ratings given when the adjectives were used alone with ratings given to pairs of adjectives, Feldman was able to obtain estimates of the "Modifying Capacities" (the extent to which each adjective pulls toward itself the evaluation of pairs in which it appears) of each adjective. The most powerful adjectives were the negative ones. From his data it was found that the weight given to negative adjectives exceeds the weight given to positive adjectives when several adjectives must be combined into one overall evaluation.
Similar "negativity biases" (or greater weighting of negative information compared to positive information in the formation of overall evaluations) were found in a number of studies in different areas of research. For example, Birnbaum (1972) used moral behaviors such as "pocketing the tip the previous customer left for the waitress" instead of adjectives. He found that in moral evaluations of pairs of behaviors the more negative of the two deeds is more important in determining the overall evaluation of the pair. Lutz (1974) in examining attitude change implications of multi-attribute models, had an interesting post hoc finding: negative information had greater impact on cognitive structure and attitude than positive information. Unlike the other studies, which used person related behaviors, Lutz used a product category, detergents, as the target object.

**Explanations for negativity**

Several explanations of the negativity bias have been offered and tested in this literature. Skowronski and Carlston (1989) provide an exhaustive review of some of these theories.

**Frequency-Weight Theories.** Fiske’s (1980) novelty explanation falls under this category. According to this explanation, negative behaviors are perceived as more novel than positive behaviors. This novelty occurs because people are thought to view the world as a moderately positive place. Because of their novelty, negative cues receive special attention and deeper processing, which causes them to have more influence in
person impressions. In this research it is assumed that novel information is more informative than expected information in distinguishing between alternatives.

There is some empirical research that supports the theory's explanation for the negativity effect. A number of studies have indicated that manipulations designed to change the novelty of a target person's characteristics affect impression ratings (Levin et al. 1973; McArthur and Solomon 1978; Taylor, Fiske 1978; Wyer 1974). Because stimulus novelty generally increases attention (McArthur and Ginzberg 1981) additional support is provided by Fiske's research linking attention and weight in impression formation. Fiske demonstrated that people pay more attention to negative and extreme cues than to positive and neutral cues (as measured by looking time) and that these negative and extreme cues are given more weight in impression formation. Fiske proposes that attention to negativity also is literally adaptive in the sense that one survives better by avoiding negative contacts.

Research in the product domain has also found support for the non-normativeness of negative information or the general expectancy of moderately positive information. For instance, Mizerski (1982) found that a majority of consumers expect "favorable" as compared to "unfavorable" information about a new product. This favorability in expectations was found across the two product categories he tested in this study: automobiles and movies.
Range Theories. Theories by Birnbaum (1972) and Wyer (1973, 1974) represent important efforts to model impression formation processes by focusing on the range of possible judgments implied by the cues. They assume that every stimulus cue implies some range of possible values along a dimension of judgment. The size of this range (or distribution of implications) reflects a cue's ambiguity or uncertainty: the more narrow a cue's distribution the less ambiguous its implications and the more biased the impression will be. In other words, the smaller the range of implications perceived for a cue, the more weight it will receive.

There is data suggesting that negative behavioral cues have narrower distributions of implications or are perceived as less ambiguous than positive cues (Birnbaum 1972; Mellers, Richards and Birnbaum 1992; Reeder and Spores 1983; Wyer 1974). For instance, Mellers et al (1992) asked their subjects to imagine 100 people described by either a single adjective or a pair of adjectives, and they were asked, "of those 100 people, how many would you dislike very much, dislike, feel neutral toward, etc...?" They selected these adjectives from Anderson’s (1968) list of 555 common personality traits. The personality traits ranged from very low (negative) to very high (positive). Using this data, likeableness distributions were estimated for the various adjectives. In both the experiments, they found the unfavorable adjectives had lower means and standard deviations than the favorable ones. This data is consistent with the range theories’
assumption that negative information has a narrower distribution than positive information.

**Category diagnosticity approach.** This approach assumes that people categorize other individuals using the informational cues that are available (Skowronski & Carlston 1987; 1989). These informational cues are assumed to be probabilistic rather than deterministic. Thus, multiple categorizations are possible with a cue. This approach postulates that people will view some behaviors as more helpful than others in discriminating between alternative trait categorizations. For instance, "stealing money" is likely to be perceived as much more informative with respect to an actor's honesty or dishonesty than the behavior "eating apples". The behavioral cue's utility in discriminating between alternative categories is referred to as its category diagnosticity. Attributes perceived as more diagnostic for category membership will have more of an influence on impression formation than will less diagnostic attributes.

Skowronski and Carlston (1987) argue that negative behaviors are perceived as more diagnostic because they are thought to be characteristic primarily of actors who belong in negative categories; positive behaviors are seen as less diagnostic because they may be characteristics of actors in both positive and negative categories. Individuals possessing both negative and positive traits may perform actions that are consistent with their dispositions. They postulate that with regard to morality behaviors (those
considered most often in this research area), people generally expect more inconsistency from those perceived as possessing negative traits than from those perceived as possessing positive traits. In essence, a good person must act good most of the time to retain that categorization, whereas a bad person needs to act bad only some of the time. Therefore, negative behaviors are more helpful in categorizing a person than positive behaviors. Thus, negative information would generally be expected to get more weight than positive information in overall evaluations.

Since Skowronski & Carlston (1987; 1989) argue that whether such biases occur is presumed to depend on the implicit relationships between behaviors and trait categories, it could be argued that when positive cues are perceived as more diagnostic than negative ones then a positivity bias (greater weighting of positive as compared to negative information) would be predicted. They propose that this is likely in the ability domain. They use Heider's (1958) logic to argue that people generally perceive success as evidence that an actor has the ability to perform a task. On the other hand, they perceive failure as ambiguous, possibly reflecting situational, motivational, or ability-related factors. Consequently, success should be perceived as a more diagnostic indicator of ability than should failure.

Skowronski and Carlston (1987), used the impression formation paradigm to test these hypotheses. When the subjects were asked to rate the perceived probability that a
particular trait would be associated with a behavior, it was found that negative behaviors were more diagnostic than positive behaviors in categorizing the behaviors into trait categories in the morality domain, but not in the ability domain. Further, people were less likely to expect inconsistent behaviors from people described positively in terms of morality and negatively in terms of ability. Consistent with their rationale they found that measured diagnosticities of behaviors were related to their relative influence as cues in impression formation. Judgments about the morality of hypothetical targets evinced negativity biases. Judgments about intellectual ability evinced positivity biases.

Wojciszke, Brycz & Borkenau (1993) replicated the positive-negative asymmetry results obtained by Skowronski and Carlston (1987) in the morality and ability domains. Using a similar paradigm and a greater number of trait categories for both morality (honest, loyal or just) and competence (intelligent, will power or courageous) they found that positive information is weighted more in the ability domain.

Herr, Kardes and Kim (1990), using a product context, find empirical support for the proposition that negative information is more diagnostic or informative than positive information. They argue that extremely negative information has strong implications for category membership. It is useful in categorizing a product as low in quality whereas less negative and positive information is less useful, because such features (neutral and positive) are commonly possessed by high, average and low quality products. Thus,
extremely negative cues are expected to be less ambiguous than positive or neutral cues, especially in product judgement contexts. Their findings are consistent with the other research conducted on the impact of negative information in product perceptions (e.g. Mizerski 1982; Wright 1974).

**Implications for publicity information.**

Even though there are some differences between them, the category diagnosticity approach and the range theory explanations for the negativity effect appear, to be based on a similar rationale (Mellers, Richards and Birnbaum 1992). The category diagnosticity approach argues that negative information gets more weight because it is more diagnostic than positive information -- diagnosticity implying the cue's utility in discriminating between alternative categories. According to the range theory explanations, negative behaviors have narrower distributions than positive behaviors and therefore, are less ambiguous about their implications regarding category membership. This argument is essentially the same as the one made by the diagnosticity explanation. Thus, we will treat the category diagnosticity and range theory explanations interchangeably in our research and term them as the diagnosticity approach.

However, the novelty approach (Fiske 1980) uses a somewhat different rationale. Even though it also argues that negative information is more informative than positive information, unlike in the category diagnosticity approach and the range theories, no
attempt is made to measure informativeness or diagnosticity of the negative information. It is assumed that since negative information is unexpected, it is also diagnostic. The focus in this explanation is on the attention that the novel information gets, not on its informativeness. Novelty is expected to lead to greater attention to the negative information, resulting in greater weight assigned to it. However, the proposed reasoning would work only if the underlying assumption of novelty equals informativeness were to hold. Even though novel information is more memorable (e.g. McArthur 1981; Pratto & John 1991), increased memory doesn’t necessarily imply persuasion! Persuasion depends upon the relevance (informativeness) of the information to the decision. The connection between novelty and informativeness has not been established in the literature. In fact one can very easily question it (for instance see Skowronski & Carlston 1987). Further, the novelty (attention) explanation can not explain Skowronski & Carlston’s results with respect to the ability domain. Skowronski & Carlston found, that even though the subjects rated positive ability behaviors as more typical (or likely to be expected) than negative ability behaviors, they still gave more weight to these behaviors in impression formation. Therefore, attention by itself, cannot explain the overweighting of negative information. Diagnosticity of the information is a very important determinant of the weight that it gets in impression formation. Therefore, in this dissertation, we will favor the diagnosticity explanation over the novelty explanation.
The above discussion raises another important issue -- whether the negativity (or valence) of the information per se leads to its overweighting, or the underlying characteristics of the negative information (e.g. higher diagnosticity, unexpectedness) that lead to its overweighting. We favor the latter explanation in our research (underlying characteristics driving weight). We will explain our position in the following paragraphs.

Some of the research in the area of negative information supports the former proposition, i.e., the negativity or the valence of the information by itself, instead of the underlying characteristics of this information (e.g. its diagnosticity, or unexpectedness) impact the weight given to it in impression formation. Pratto & John (1991) propose an evolutionary explanation for the impact of negative information. They argue that negative affect carries an important signal because it signifies to the organism the need to change or adjust its current state or activity. Therefore, negative events are typically of greater time urgency than are events that lead to desirable consequences, and therefore are automatically attended to. Using a color-naming paradigm, they found that negative information, irrespective of its expectedness and diagnosticity, received more attention than positive information. They did not find any differences in attention paid to extreme as compared to moderate information. Past research has shown that extreme information is generally more diagnostic than positive information (e.g. Skowronski & Carlston 1987; Wojiczkske et al. 1993).
However, Pratto & John’s results are inconsistent with those of Fiske (1980) and Skowronski & Carlston (1987). Fiske using the impression formation paradigm, reported greater attention (as measured by looking time) to extreme as compared to moderate information. Therefore, Fiske found that the more diagnostic the information (more extreme) the more attention and weight it got. Further, Skowronski and Carlston (1987) using the same paradigm, found that subjects weight ability related positive behaviors more than ability related negative behaviors, since in the ability domain positive behaviors are more diagnostic than negative behaviors. Thus, these impression formation studies taken together, suggest that the diagnosticity of the information, and not the negativity of the information lead to its greater weighting.

We argue that the above inconsistencies can be resolved if we examine the paradigms within which the research was conducted. The instructions used in the impression formation paradigm lead to high levels of elaboration. Subjects are typically asked to provide deliberative evaluative judgments, and are instructed to examine the information presented for as long as they wish (e.g. Birnbaum 1972; Fiske 1980; Skowronski & Carlston 1987). However, Pratto and John (1991) used a color-naming task, which prevents intentional learning and results in incidental learning of the target adjectives. Thus, under conditions of low elaboration they find an automatic vigilance effect, where the diagnosticity of the information (e.g. its extremity) doesn’t seem to
matter. Under these conditions, negative information may be attended to automatically, irrespective of its diagnosticity, and therefore, given more weight in impression formation. However, under the higher elaboration conditions (e.g. in the impression formation tasks), the use and weighting of the information is likely to depend upon a number of factors like its diagnosticity. Therefore, we can argue that in a publicity context, where high levels of elaboration are expected given the credibility of the information, the underlying characteristics of the information like its diagnosticity, and not just its valence, are likely to determine its impact on attitudes.

Thus, we agree with Skowronski & Carlston (1987; 1989) when they argue that negative information gets more weight only when it is more diagnostic than positive information, i.e. is able to distinguish between alternative categories better. As their data indicates, this is not the case in all domains. An important question, then from our perspective, is whether negative information is likely to be more diagnostic than positive information in the product domain. Consumers generally expect more inconsistency from bad products than good products. For instance, a good product must have good performance (e.g. reliable performance) most of the time to retain that categorization, whereas a bad product need perform badly (e.g. unreliable performance) only some of the time. Therefore, an unreliable brand may perform reliably sometimes and unreliably at others, however, a good brand performs reliably at all times. Therefore, negative
information (e.g. unreliable performance) is likely to be more helpful in categorizing a product than positive information, and hence, get more weight than positive information in the formation of overall evaluations. There is also some empirical evidence in the literature that negative information is considered as less ambiguous and more informative for categorizing the target than positive or neutral information in the product context (Herr, Kardes & Kim 1991). Therefore, we can conclude from this literature that negative information is likely to be more diagnostic than positive information and therefore, receive more weight in the formation of overall evaluations.

However, the impression formation paradigm, within which most of the above research has been conducted is very restrictive and limits our ability to generalize these results to a publicity situation. In this paradigm, subjects are exposed to both negative and positive information about an unknown target object or person and are asked to form an impression of the target on the basis of this information. Publicity coverage by the media, on the other hand, generally revolves around a single piece of information, and therefore may focus on either positive or negative information about the brand. Publicity information does not typically present both positive and negative information together as is done in the impression formation paradigm. Further, consumers in the real world are generally familiar with the target brand and already have pre-existing attitudes towards it. In this scenario, then, the information integration task is different from the one imposed...
in these studies: it involves the subject integrating a negative or a positive piece of new information into a pre-existing attitude.

Past research has demonstrated that when recipients have prior knowledge and prior attitudes toward the target brand, they are likely to interpret the information in relation to this knowledge, rather than in relation to general, semantic concepts (Wood, Kallgren & Priesler 1985). Existing research indicates that it may be inappropriate to generalize findings across subjects with different levels of prior knowledge of and prior attitudes towards the target brand. For instance, Fazio, Herr & Powell (1992) found the effect of mystery ads (i.e. those in which the brand is not identified until the end of the ad) to be moderated by novelty of the brand. The hypothesized attitudinal effects of mystery ads were not replicated for known brands. Wyer & Carlston (1994) express a similar sentiment in their recent review of the social cognition literature, from which this restrictive research paradigm has been taken: "The theoretical formulations that have developed seem inadequate to account for the processing of information about familiar people and situations, about which people have prior knowledge."

Thus, we may be able to generalize the findings of this literature only to publicity situations where consumers do not have strong prior attitudes toward the target brand. Under these conditions, we may expect that negative publicity information will be perceived as more diagnostic and, therefore, will be weighted more (Birnbaum 1972;
Kanouse & Hanson 1972; Fiske 1980) than equally valenced positive publicity information. However, this generalization of the impression formation findings needs to be empirically tested because the publicity context is very different from the impression formation paradigm. In fact in all of the relevant past research in the person perception as well as the product domain, subjects have been exposed to multiple pieces of information about a novel target. They have then been asked to form an overall evaluation on the basis of this information. For instance, Mizerski (1982) asked subjects to form judgments about novel brands based on information provided about three attributes. Herr, Kardes & Kim (1990) and Wright (1974) used multiple attributes about unknown brands in a consumer reports format. Thus, an important research question is whether the negativity effects obtained in the impression formation paradigm would transfer to a setting in which consumers: have knowledge and attitudes about the target brand; and they only see one piece of information at a time.

A second major issue relating to the impression formation literature deals with the second generation processes (e.g. see Petty 1994). As opposed to the higher level first generation processes (e.g. greater impact of negative information because of its higher diagnosticity), the second generation processes focus on how the first generation processes occur (e.g. does the diagnosticity of negative information impact attitude change via an increase in the weight given to negative information or does it make people
perceive it as more extreme). An objective of this dissertation is to address these issues.

Most of this literature assumes that the effect of negative information on overall evaluations is through increased weighting of the negative as compared to positive information (e.g. Birnbaum 1972; Kanouse & Hanson 1972). The terms "overweighting" and "negativity bias", used in this literature, have been frequently used in Anderson's information integration theory (1966; 1974). The information integration theory assumes that the internal representation of a piece of information has two constituents: a scale value $X$ that represents its location on the dimension of judgment and a weight $w$ that represents its psychological importance with respect to this dimension of judgment. In an information integration task several pieces of information are combined into an overall judgment. The result $Y$ of this integration process is given by an algebraic composition rule. In many cases an averaging rule turns out to be an appropriate description.

$$Y = \frac{\sum_{i} w_{i}X_{i}}{\sum_{i} w_{i}}$$

The underlying assumption in Anderson's (1966) analysis of negative versus positive adjectives, is that the impact of negative information on "Y" is via the changing weights ($w$'s) while the scale values of the adjectives remain constant. In the tradition of
Anderson's earlier work, the subsequent literature has also assumed that the effect of negative information on overall evaluations is via changes in weighting. A major focus of the research in the impression formation area has since revolved around examining the robustness of this negativity effect. Little attention has been devoted to examining the assumption of constant scale values in more detail, i.e., whether the negativity effect is due to changes in weight alone or changes in value also occur.

An objective of this research is to address the above question. It is conceivable that negative information affects judgment not only through differential weighting but also through differential meaning as perceived by the subjects. Negative information gets more attention (Fiske 1980; Pratto & John 1991), and processing resources, and since focussed thought is expected to lead to polarization effects (e.g. Tesser 1978), negative information may be perceived as more extreme when people focus on it than when they do not. This change of meaning may account for the enhanced impact of negative information on overall evaluations. Therefore, this possibility needs to be investigated further. We will return to this issue in more detail in the conclusion section of this chapter.
Fear Appeals

A second stream of research that has dealt with the effects of negative information relates to fear appeals. In this literature, message recipients are exposed to negative information, specifically the negative consequences of performing the target behavior. The intent of the message is to persuade the subjects to change their behavior. The negative messages provided in this research are expected to arouse fear, a negatively valenced emotion. Fear appeals generally lead to a high level of arousal, because the threat in the fear appeal is perceived to be significant and personally relevant by the subjects (Easterling & Leventhal 1989; Ortony & Turner 1990).

The earlier drive models of fear appeals, the most popular being Janis' (1967) fear-as-acquired drive model, proposed an inverted-U shaped relation between fear and message acceptance. Janis claimed that weak appeals created too little tension to motivate individuals to get rid of their fear, whereas strong appeals create too much tension and result in maladaptive outcomes (e.g. defensive avoidance). However, the drive models have not obtained much empirical support. Specifically, the model's central hypothesis, that acceptance of the message occurred when fear was reduced, was not supported (e.g. Mewborn & Rogers 1979; Rogers 1983).

Subsequently a second generation of fear models emerged. Leventhal (1970) developed the parallel response model which focused more on cognitive processes, as
opposed to emotional processes. He argued that protective adaptive behavior stemmed from attempts to control the danger or threat (cognition), not from attempts to control the fear (emotions). Therefore, if people thought about the threatening message and developed strategies to avert the danger or threat (attitude, intention, or behavior changes), they were engaging in danger control processes. In contrast, if people focused on their feelings of fear, and tried to control their fear (e.g. denial), they were experiencing fear control processes. Leventhal (1970) attempted to reconcile past literature with his model, but offered no evidence for its veracity with a single study. He made general statements about conditions leading to fear or danger control processes, but he failed to specify exactly when one process should dominate over another or what specific factors elicit the different processes. Thus, the main problem with the model has been its lack of precision (Beck & Frankel 1981; Rogers 1975; Witte 1992).

Rogers' (1975, 1983) protection motivation theory (PMT) has been the most well accepted framework for fear appeals research in the 80s and 90s. According to the PMT, when an individual faces a threat, four cognitive appraisal processes mediate the choice of a coping behavior. These four processes appraise the information available about the perceived severity of the threat, the perceived probability that the threat will occur, the perceived ability of coping behavior to remove the threat (coping response efficacy), and the individual's perceived ability to carry out the coping behavior (self-efficacy). The
review of these appraisal processes is an intermediate state called "protection motivation". Protection motivation is an intervening variable that has the typical characteristics of a motive: it arouses, sustains and directs activity and is operationalized as intentions (Rogers 1975). When each of the four PMT variables is at a high level, then maximum protection motivation, and subsequent message acceptance, is proposed to occur. According to Rogers, fear may occur but is not considered necessary to influence behavior.

In a reformulation of the PMT, Rogers (1983) extended the model into one that differentiates between maladaptive threat appraisal and adaptive coping appraisal processes. In the threat appraisal process, Rogers says people may continue to engage in maladaptive behaviors (e.g. unsafe sex) if the rewards of performing the maladaptive behavior (e.g. pleasure, social approval) are greater than the perceived severity of the danger (e.g. AIDS is fatal) and their perceived susceptibility to the danger (e.g., increased risk of HIV contraction). Thus, increases in rewards heighten the probability of a maladaptive response while increases in perceived threat (severity/susceptibility) decrease the probability of a maladaptive response. For the coping appraisal, increases in perceived response/self-efficacy increase the likelihood of adaptive behavior while increases in response costs decrease the likelihood of adaptive behavior. For example, people may choose to perform adaptive behavior (e.g. use condoms) if perceived response
efficacy (e.g. "condoms are effective protectors against AIDS") and perceived self-efficacy (e.g. "I'm able to use condoms to effectively prevent AIDS") are greater than response costs (e.g. time, expense, difficulty).

Most of the fear literature has involved testing the effectiveness of fear appeals in the context of public service and health related messages, e.g. relating to smoking, drugs, sexually transmitted diseases, heart disease and cholesterol. For instance, Maddux and Rogers (1983) designed a study to test for the self-efficacy component of the PMT. They exposed a sample of smokers (people who had been smoking at least an average of 10 cigarettes per day for the past one year) with a target message on cigarette smoking. Different versions of the message were used to manipulate the variables of interest: the message supported the conclusion that cigarette smoking was either likely or unlikely to lead to lung cancer and heart disease (high versus low probability of occurrence); that cessation of smoking was likely or unlikely to eliminate or reduce risk for these conditions (high versus low coping response efficacy); that lung and heart disease either are or are not seriously debilitating conditions (high versus low outcome severity); and that the reader would have either relatively little difficulty or relatively great difficulty reducing or eliminating cigarette smoking (high versus low self-efficacy expectancy). The dependent measures consisted of the subject's intentions relating to future smoking behavior. Maddux and Rogers found that self-efficacy had a direct influence on
subjects' intentions to decrease and/or quit smoking. In addition they replicated past research demonstrating that both the probability of a threat's occurrence and the effectiveness of a coping response have a positive main effect on the intentions to reduce or give up smoking.

**Implications for publicity information**

The empirical findings with respect to the fear literature are inconsistent, if not contradictory (Tanner, Hunt & Eppright 1991; Witte 1992). While some studies substantiate the effectiveness of fear appeals (e.g. Beck 1984; Insko, Arkoff & Insko 1965; Stainback & Rogers 1983), others demonstrate their ineffectiveness (e.g. Janis & Feshbach 1953; Kohn, Goodstadt, Cook, Sheppard & Chan 1982; Krisher, Darley & Darley 1973), and still others document mixed results (e.g. Hill & Gardner 1980; Rogers & Mewborn 1976). Thus, negative information, in the context of fear appeals, appears to be rejected sometimes and accepted at other times. The research has thus evolved around identifying factors and/or conditions under which this negative information may be accepted or incorporated in the message recipients attitudes and behavior. This is in sharp contrast to the impression formation literature, in which overweighting of negative information in the formation of attitudes is a robust finding. Subsequently, in contrast to the fear appeals literature, the impression formation research is attempting to identify
conditions under which negative information is not overweighted in forming overall
evaluations (e.g. Skowronski & Carlston 1987; Wojiczisk, Bryce & Borkenau 1993).

A major difference between the fear appeals and the impression formation
literature relates to the prior experience and attitudes of the experimental subjects. In the
impression formation literature the presented information typically pertains to an
unfamiliar person or brand who is either hypothetical or fictitious (e.g. Herr, Kardes &
Kim 1990; Mizerski 1982; Wright 1974; Wright & Weitz 1977). However, in the fear
appeals literature, the subjects have a positive prior attitude towards the target behavior
about which negative information is provided (e.g. smoking) and may be committed
towards maintaining this attitude because it is very difficult to or unpleasant to change the
target behavior. For instance, a typical fear appeal might advocate giving up one's
favorite foods to counter the ill effects of a diet high in cholesterol, and most people are
fairly committed to their dietary habits. The processing goal of such committed message
recipients, then, may be to confirm the validity of particular attitudinal positions and
disconfirm the validity of others (Chaiken, Liberman & Eagly 1989). Therefore, it is
likely that when the message recipients are high in commitment toward the target, they
may attempt to reject the negative information. However, when their commitment toward
the target is low, the impression formation effects of overweighting of negative
information may be found. Thus, the findings of the fear appeals literature may be limited to the consumers who may be committed towards the target.

Commitment

The inconsistent findings of the impression formation and fear appeals indicate that commitment is likely to be a moderator of the impact of negative information on consumers’ attitudes. However, variables that are likely to influence the motivation of recipients to defend their existing attitudes (e.g. commitment), have not been studied in the research on the effects of negative information. This is not surprising given that the stimuli in most of the impression formation literature (which has dealt with negative information most extensively) consist of novel objects (Eagly & Chaiken 1993; Wyer & Carlston 1994).

Commitment has generally been defined as a state of being pledged or bound to a particular course of action (Gerad 1968; Johnson 1973; Keisler 1971). Commitment is a motivational factor that is expected to lead to biased processing of negative information. The idea that systematic processing might be biased by people's attitudinal commitments follows from earlier theorizing about "ego involving" attitudes (e.g. Ostrom & Brock 1968; Sherif & Hovland 1961).
Especially germane to our present discussion is Kiesler's (1971) claim that committing an individual to one of his existing attitudes would make him resistant to attacks on the attitude. Kiesler and his colleagues carried out a number of experiments designed to demonstrate this proposition. In relevant studies, commitment took the form of an individual publicly advocating a position or engaging in some other behavior that would be seen as linking him to his attitude. For instance, in a number of these experiments that demonstrated commitment's dampening effect on attitude change, high commitment subjects believed that their speech or essay would be made public to an audience, whereas low commitment subjects had no such expectation (e.g. Halverson & Pallak 1978; Kiesler, Pallak and Kanouse 1968).

From a marketing perspective, commitment may be defined as an emotional or psychological attachment to a brand within a product class (Lastovicka & Gardner 1978). Brand related commitment could result from a multitude of factors. Meyer and Allen's (1991) three component model seems to be particularly relevant here. Based on their model, the three inputs to brand commitment are expected to be: i) the attitudinal (or affective) input which comprises the intensity of the consumers' preference for that brand. Therefore, the more a brand is liked, the higher the commitment is expected to be towards it. ii) A cost (or behavioral) input which comprises switching and sunk costs, implying that the higher the sunk costs or switching costs, the more committed the consumer is
likely to be toward his/her current brand. For example, a newly purchased car or a frequent flyer program. iii) A cognitive input which deals with the past experience of the consumer with the target brand. The greater the past positive experience with the brand, the higher the commitment is likely to be.

The primary effect of commitment is to make cognitions more resistant to change (e.g. Crosby & Taylor 1983; Keisler 1971). Consumers who are high in commitment are likely to be more resistant to negative (counterattitudinal) information about the brand than those who are low in commitment. They are expected to be "defense motivated" or motivated to maintain their existing attitudes because changing this attitude implies effort or cost and is unpleasant.

**Commitment versus involvement**

The close association between the concepts of involvement and commitment has led to some confusion in the literature. For example, Robertson (1978) utilized Krugman's (1965) notion of low involvement to discuss low-commitment consumer behavior, in which he defined commitment as the strength of the individual's belief system with regard to a product or brand. In essence, in his work, Robertson equated low commitment to low involvement. Lastovicka and Gardner (1978), studying a number of products, identified three orthogonal components of involvement: familiarity,
commitment and normative importance. Traylor (1983) on the other hand, suggests that ego involvement and brand commitment are different but related constructs.

Arguments put forth by Freedman (1964) help to clarify the relationship between commitment and involvement. He notes that one usage of the term "involvement" implies a commitment to a particular position on an issue, while another usage refers to the general level of interest or concern about an issue without reference to a specific position. Thus, a person may be involved with an issue without yet having taken a stand. This might imply that involvement often precedes commitment. Involvement results from the fact that important values or the person's self-image are engaged or made salient by a decision situation. Commitment results when these values, self-images, important attitudes, and so on become cognitively linked to a particular stand or choice alternative.

Freedman’s point can be further illustrated by considering the definitions of the relevant constructs (involvement and commitment) in the domain of interest: products and services. Product involvement is the interest a consumer finds in a product class. Such interest stems from the consumer’s perception that the product class meets important values and goals. Purchase involvement or brand decision involvement is the interest taken in making a brand selection. For instance, high purchase-involvement implies a very deliberative brand choice decision process. Thus, product involvement is the interest taken in possessing and using a product, and purchase involvement is the
interest taken in the brand selection task. Commitment on the other hand is the emotional or psychological attachment to a brand within a product class. Product class involvement and purchase involvement are not directed towards any particular brand, and therefore, may be likely to enhance objective elaboration. However, commitment, which is directed towards a particular target brand is also likely to enhance elaboration, but in a biased manner. Therefore, even though involvement and commitment are both motivational constructs they differ with respect to their directedness.

Consistent with this reasoning, a number of researchers who have empirically examined the relationship between involvement and commitment, have found involvement and commitment to be different but related constructs. Involvement has empirically been shown to be an antecedent of commitment. For instance, Beatty, Kahle and Homer (1988) found empirical support for their involvement-commitment model which proposes that ego involvement leads to purchase involvement which leads to brand commitment. Mittal & Lee (1989) who also empirically examined the relationship between product class involvement, purchase involvement and commitment, found involvement to be an antecedent of commitment in their analysis. Using a similar rationale, Crosby and Taylor (1983) suggest that a person will most likely become "involved" in an issue without yet taking a stand and therefore involvement is likely precede or lead to commitment.
Therefore, in our research, we take the position that involvement and commitment are two different but related constructs, with involvement being a potential predecessor of commitment. However we understand that commitment and involvement may be correlated in the product situation. Therefore, in order to avoid confounding, we intend to use product class involvement as a covariate in our research.

**Gaps in the Commitment Literature and their Implications for Publicity**

The major finding in this literature is that commitment enhances resistance to counterattitudinal information. Most of the research has revolved around replicating this finding in different contexts, and via using different methods (e.g. see Keisler 1971). However, there is very little research examining “why” and “how” commitment leads to increased resistance. As Keisler (1971) suggests, this resistance could be due to different alternative processes: inconsistent information (coming from an attack) may not be easily assimilated by the committed individuals (since they may be selectively perceiving attitude consistent information or avoiding the counterattitudinal information); or the committed person may be better able or motivated to refute and counterargue the attack information (defensive processing). Even though empirical evidence is far from conclusive, the commitment literature seems to have favored the former explanation (selective perception) more than the latter (defensive processing).
Selective exposure and perception was a major theme of Festinger's (1957) first book on dissonance theory. Festinger (1957, p.137) described such selective perception processes as functioning to "prevent the new cognition from ever becoming firmly established". In that volume, he maintained that exposure to information is relatively unbiased prior to the time when people have committed themselves to a decision. Following commitment to a decision, Festinger maintained, people seek out information supportive of their decision and avoid information contrary to it.

Salancik & Keisler (1971, described in Keisler 1971) conducted an experiment that attempted to examine the two explanations for effect of commitment. They exposed subjects high and low in commitment to adjective pairs that were consistent, inconsistent or irrelevant to the speech (attitude consistent) that they had made earlier in the experiment. The high commitment subjects recalled significantly more consistent word pairs than low commitment subjects, whereas the low commitment people recalled more inconsistent than consistent adjective pairs. This finding was taken as preliminary evidence that high commitment people were likely to selectively perceive attitude consistent information and avoid inconsistent information. However, as Keisler admits, at the time this research was done, cognitive measures indicating processes were not well developed, and therefore, it was difficult to draw firm conclusions about underlying
processes from this research. Perhaps due to this reason (lack of process measures) there was very little research examining the processes underlying commitment.

More recently, Sweeney and Gruber (1984) found some support for the selective avoidance hypothesis when they examined interest in and attention to the Watergate scandal on the part of three groups of voters: Nixon supporters, McGovern supporters, and undecided citizens. Sweeney & Gruber found that McGovern supporters reported more interest in and attention to the Watergate hearing than undecided citizens or Nixon supporters. Confirming the selective avoidance hypothesis, Nixon supporters appeared to know less about Watergate than the McGovern supporters or undecided citizens. This study suggests that when attitudes are strong and are challenged or supported by highly credible, real-world event, selectivity effects may be clearly discernable.

Crosby & Taylor (1983) who investigated the role of commitment in the context of preference stability among voters, also believed that the reason high commitment people resisted counterattitudinal information and had stable attitudes was that they engaged in selective perception.

An alternative explanation for resistance of high commitment consumers to counterattitudinal information is that they engage in defensive processing of the message. Defensive processing implies that instead of ignoring or avoiding the attitude inconsistent information, the message recipients engage in relatively effortful cognitive processes
attempting to refute or deny that information. Several theorists have posited such inconsistency-reducing, or defensive cognitive processes by which people resist changing their attitudes (e.g. Abelson 1959; Festinger 1957; Petty & Cacioppo 1986a & b). These processes have been variously labeled as biased elaboration (Petty & Cacioppo 1986a & b), defensive motivation (Chaiken et al 1989), denial and bolstering (Abelson 1968; Festinger 1957). When message recipients engage in these processes they search for and retrieve relevant stored knowledge that can support their denial (counterargumentation) attempts. In addition to denial, message recipients could engage in bolstering (another effortful cognitive process) by adding consistent elements to the existing inconsistent structure. For example, a smoker when faced with negative information about smoking could add consistent elements such as “smoking keeps my weight down”. Adding consistent elements often functions to reduce the importance of the inconsistent cognition, and therefore, dilutes the magnitude of the inconsistency. Even though the commitment literature has not found support for hypothesis, it has been supported using other motivational constructs such as involvement (e.g. see Petty & Cacioppo 1986a & b).

Both the processes (selective perception and defensive processing) provide viable alternatives for understanding the resistance of high commitment consumers. However, given the paucity of empirical work dealing with this issue, no firm conclusions can be
drawn. Further, it is unclear at this point, which of these processes would be likely to dominate in the product domain. In order to understand the impact of negative information on high and low commitment consumers, and to formulate response strategies to deal with negative publicity, it is important for us to know "how" consumers process negative information.

Another important gap in the commitment literature is its single handed focus on attack or counterattitudinal information. The impact of commitment on the processing of attitude consistent or positive information has not been examined quite as extensively. The Social Judgment theory which examines ego-involvement (attitudes that are linked to aspects of self), a concept similar to commitment, predicts that ego-involved recipients are likely to exhibit greater positive attitude change when exposed to attitude consistent information than are recipients low in ego involvement. This prediction is based on the theory's postulate that greater assimilation produces more positive evaluations of message content, which in turn, produce greater amounts of attitude change.

Therefore, the commitment literature presents a robust finding (increased resistance to counterattitudinal information with commitment), but does not provide us with a clear understanding of the processes underlying this finding; nor are its directions with respect to proattitudinal information very clear. We intend to examine these issue in our research. An understanding of these issues is important for our perspective. It is on
the basis of our understanding of these processes that we will be able to predict the relative effectiveness of different response strategies for high and low commitment consumers exposed to negative publicity.

Conclusion

At this point we will take a step back and revisit the objectives of our research. We will then link them to our literature review. On the basis of this discussion we will draw our conclusions and identify issues to be subjected to further research. This discussion will lead into our hypotheses.

We started out with a set objective in mind: to understand “how” consumers process negative information. We reasoned that once we know how people process negative information, we will be able to design intervention strategies to deal with negative publicity. We observed that most companies currently use a “mass approach” in responding to negative publicity (e.g. see Weinberger, Romeo & Piracha 1991). The assumption of homogeneity of consumer response to negative information, which underlies this mass approach, is questioned. The following questions are asked in this research. How do consumers process negative information? What factors moderate consumers’ processing of negative information? And how can we use our knowledge of negative information processing in formulating response strategies to deal with negative
publicity? The first part of the dissertation will deal with the first two questions, and then based on the findings of the first phase we will answer the third question (response strategies).

In this chapter we began by reviewing two streams of literature that have dealt with people's reactions to negative information: impression formation and fear appeals. The findings of these two areas with respect to negative information are contradictory. In the impression formation research, negative information attracts attention and is weighted heavily in the formation of overall evaluations (Fiske 1980; Skowronski & Carlston 1987). In contrast, in the fear appeals literature, negative information is often rejected and research has evolved around identifying factors that would lead to acceptance of negative information. We argue that these inconsistencies can be resolved by examining the paradigms within which this research was conducted. The impression formation research used unknown or hypothetical targets in its research, whereas, the fear appeals literature used highly involving issues/behaviors towards which the subjects were likely to be committed. Based on this observation we identify commitment as a moderator of the impact of market-related negative information on consumers' attitudes. Consumers high in commitment are likely to resist negative information (similar to the findings of the fear appeals literature) whereas low commitment consumers are expected to weight negative information heavily in the formation of their overall evaluations (consistent
with the impression formation literature). By suggesting that consumer's level of commitment moderates the impact of negative information, we are questioning the assumption of homogeneity of consumer response to negative information.

We believe that it is not the "negativity" per se but the underlying characteristics of the negative publicity (e.g. its higher diagnosticity or attitude-inconsistency) that lead to the proposed effects. As discussed earlier, the low commitment consumers are expected to weight negative information more than positive because it is considered to be more diagnostic than positive information in the product domain. Therefore, in domains where positive information is more diagnostic than negative information, we would expect negative information to be weighted less than positive information. Similarly, for the high commitment consumers negative information is resisted because it is inconsistent with their positive attitude towards the target brand. However, if the attitude of the high commitment consumers was very negative (instead of positive) towards the target brand, positive instead of negative information would be resisted. Therefore, it is not the negativity of the publicity information but it's underlying characteristics (diagnosticity, inconsistency) that lead to the information processing effects that we predict.

Our next step, then, is to understand "how" the two groups of consumers (high and low in commitment) are likely to process negative as opposed to positive
information. This understanding of processes is likely to help us in designing intervention strategies.

In attempting to understand how low commitment consumers process negative information, we could use the findings of the impression formation literature to derive our hypotheses. Although the impression formation literature has used novel and unknown targets (that subjects are not likely to be committed toward) the information has been presented using a paradigm which is very different from the real life publicity situation. In these studies, multiple pieces of information about unknown targets are presented to subjects who are then asked to form an impression of the target on the basis of this information. In the real world publicity situation consumers already have pre-existing attitudes toward the target brand, and they see only one piece of information (either positive or negative) which is integrated into the prior attitude. The major finding in the impression formation literature is the higher diagnosticity and hence greater weighting of negative information as compared to positive information (e.g., Herr, Kardes & Kim 1990; Skowronski & Carlston 1987). We need to empirically test whether this result would hold when consumers have prior attitudes toward the target and are exposed to only one piece of information (either positive or negative). We also need to empirically test whether the diagnosticity of negative information mediates attitude change for these consumers.
With respect to the high commitment consumers it can be predicted that they will attempt to resist the negative information (consistent with findings of the commitment literature: e.g., Crosby & Taylor 1983; Keisler 1971). However, the evidence with regard to "why" this occurs is not conclusive. The increased resistance could be either due to selective perception and avoidance (e.g. Festinger 1957; Salancik & Keisler 1971) or due to defensive processing of the negative information (e.g. Abelson 1968; Chaiken et al 1989; Petty & Cacioppo 1986a & b). We intend to develop hypotheses and obtain empirical evidence with respect to this question, specially in a product setting.

The literature in both person perception and product evaluations (e.g. Herr, Kardes & Kim 1990; Mizerski 1982) has reported higher perceived diagnosticity of negative as compared to positive information. However, all of this research has been conducted in relatively low commitment settings. Therefore, another question that needs to be addressed is whether this perceived diagnosticity effect generalizes across levels of commitment.

Once our first generation questions are answered, we can begin looking at a second set of process questions (e.g. see Petty 1994) which focus on how the first generation processes occur. For instance, first generation issues would involve understanding the outcomes and the processes at a higher level e.g., establishing that high commitment consumers exhibit lesser attitude change than low commitment consumers;
that high commitment consumers engage in defensive processing of the negative information (instead of selective avoidance) etc. The second generation issues would include going a step further. For instance if high commitment consumers process the negative information defensively, does it mean that they give less weight to it, or does it imply that they perceive this information to be less extreme and therefore less harmful than low commitment consumers do, or is it a combination of these two processes.

Only recently have researchers begun to address process issues at this level (e.g. Abele & Petzold 1994; MacKenzie & Spreng 1992; Petty 1994). The underlying assumption in many literatures (e.g. person perception, as discussed earlier in this chapter) is that attitude changes are due to changes in weight and the perception of the information remains constant. This is perhaps because evidence in favor of changes in perception is limited (though not absent) in the literature. Another reason could be that research in most domains is still focussing on the first generation issues (e.g. persuasion research as suggested by Petty 1994).

The limited research, that exists, on the perception of information suggests that the priors of the subjects (e.g. their prior attitudes, beliefs etc.) may be likely to impact their perception of the target information. For instance, research on Thurstone scaling techniques, in the sixties, examined whether the scaling of attitudinal stimuli was constant across judges or whether these evaluations were influenced by the prior attitudes.
of the judges. Hovland and Sherif (1952) presented data that showed systematic biases due to the judges' own attitudes. Social judgment theory (Sherif & Hovland 1961; Sherif & Sherif 1967), which proposes that people's attitudes exert selective effects on their perception and evaluation of, and memory for attitude-relevant information, has been applied to the issue of whether judges' own attitudes influence the scale values assigned to belief statements in Thurstone scaling. Consistent with the arguments of the social judgment proponents, subsequent research in the area of Thurstone scaling confirmed that judges' attitudes influence the perceived position of attitudinal statements (e.g. Eiser 1971; Manis 1960; Zavolloni & Cook 1965). Research has shown that judges with more extreme attitudes contrasted attitude statements away from their own position, that is, they viewed statements that were relatively distant from their own position as more extreme than did judges whose attitudes were more neutral (e.g. Dawes, Singer & Lemons 1972).

More recently, Lord, Ross and Lepper (1979) made subjects who supported the capital punishment and subjects who opposed it, read reports portrayed as empirical studies on capital punishment. They read these reports along with some criticisms of the studies and rebuttals of these criticisms. One of these studies confirmed subjects' attitude

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1Research by Kelley, Hovland, Schwartz & Abelson (1955) suggests that the severity of the problem may be dependent on the method used. It is expected to be most serious for scalings by the method of equal-appearing intervals; and least likely with the method of paired comparisons.
on capital punishment, and one disconfirmed it. Both the proponents and opponents of capital punishment rated the report that confirmed their own views as more convincing and better conducted than the one that disconfirmed their views.

Thus, there seems to be some evidence in the literature that the meaning of a presented piece of information may be perceived differently by people, depending upon their prior beliefs and attitudes. This is specially interesting to us given that we are examining differences in processing of negative information by high and low commitment consumers. Commitment, like prior attitudes and prior beliefs, is also likely to impact the perceivers motivation to defend their attitude, and therefore, may also lead to biased perception of the target information.

We are interested in examining the issue of weighting versus perception at two levels: a) Whether consumers high and low in commitment are going to differ in terms of these processes (weighting and perception). For instance, on the basis of the literature cited above, it could be postulated that consumers high in commitment may be more likely to perceive the information in a biased manner than consumers low in commitment; b) Whether these processes are symmetric or asymmetric with respect to the valence of the information. That is, will negative and positive information show these perceptual biases or would they be restricted to only one type of information.
CHAPTER III
PROCESSING OF NEGATIVE INFORMATION

In this section we will develop our hypotheses related to the processing of negative and positive information by high and low commitment consumers. We will then describe the methodology and results of a study conducted to test these hypotheses.

HYPOTHESES

Attitudes

Attitude Change

Consistent with findings of the impression formation literature we expect low commitment consumers to perceive negative information as more diagnostic than positive information, and therefore, weight negative information more than positive information (Fiske 1980; Herr, Kardes, & Kim 1991; Skowronski & Carlston 1987). Thus, we expect them to exhibit greater amount of attitude change with negative as compared to positive publicity information.
However, when high commitment consumers are faced with negative information, we expect a reversal, i.e. a positivity bias (greater impact of positive as compared to negative information on attitude change). High commitment consumers are expected to resist the counterattitudinal negative information (Keisler 1971) and pay great attention to and elaborate on the attitude consistent positive information. This effect is consistent with both the processes (selective perception and defensive processing) proposed in the literature for the high commitment perceivers.

According to the selective perception hypothesis (Crosby & Taylor 1983; Sweeney & Gruber 1984) high commitment consumers are expected to selectively perceive attitude consistent positive information and avoid attitude inconsistent negative information. The avoidance of negative information is expected to diminish its impact on the attitudes of these consumers. The relatively greater attention devoted to positive information is likely to enhance its impact on attitudes. Therefore, one would expect greater attitude change with positive information than with negative information. The defensive processing hypothesis (Eagly & Chaiken 1993; Petty & Cacioppo 1986a & b) also makes the same prediction. According to this explanation, high commitment people are likely to engage in biased processing of the publicity message. They are expected to counterargue the negative (counter-attitudinal) message more than the pro-attitudinal positive message, and therefore, discount the negative message more than the positive
message. Therefore, positive information would be expected to lead to greater attitude change than negative information.

H1(a): Low commitment consumers are expected to exhibit significantly greater attitude change when exposed to negative as compared to positive publicity.

H1(b): High commitment consumers are expected to exhibit significantly greater attitude change when exposed to positive as compared to negative publicity.

Attitudinal Ambivalence and Confidence

Prior to being exposed to the negative publicity, the low commitment consumers are expected to have some positive elements/information associated with their brand attitudes. This is because people’s general expectations about brands are positive (Mizerski 1982). Further, most consumers are likely to have seen some positive advertising by the brand. Once exposed to the negative publicity, these consumers are expected to integrate this information in their attitudes (Skowronski & Carlston 1987). The resultant attitudes are thus, expected to be ambivalent (Kaplan 1972; Scott 1969), or have both positive and negative elements associated to them. Ambivalent attitudes tend to be relatively unstable (Kaplan 1972). The relative instability of the attitudes is also likely to decrease the level of confidence with which the consumers hold these attitudes.
Therefore, low commitment consumers exposed to negative information are expected to have ambivalent attitudes, that are held with little confidence.

However, when these consumers are exposed to positive information, their attitudes are likely to be associated predominantly with positive elements. Therefore, the resultant attitudes are likely to be more stable (less ambivalent) and confident in this condition compared to the condition in which they are exposed to negative information.

High commitment consumers, on the other hand, are expected to resist negative publicity (Crosby & Taylor 1983; Keisler 1971). Since these consumers are likely to discount the negative information, it is not likely to be strongly associated to their attitudes. Thus similar to their pre-message attitudes, their post-message attitudes are also expected to be linked to predominantly positive elements. This is likely to result in low levels of attitudinal ambivalence and high levels of attitudinal confidence. Similar attitudinal outcomes are expected when these consumers are exposed to positive information. This is because similar to the negative publicity condition, their attitudes in this condition are also likely to be linked with largely positive elements. Therefore, we don't expect high commitment consumers to exhibit significant differences in attitudinal ambivalence and confidence when exposed to negative versus positive information.

H2(a): Low commitment consumers are expected to exhibit: i) significantly more ambivalent attitudes; ii) significantly lower levels of attitudinal confidence, when they are exposed to negative information as compared to positive information
H2(b): High commitment consumers are not expected to exhibit: i) significantly more ambivalent attitudes; ii) significantly lower levels of attitudinal confidence, when they are exposed to negative information as compared to positive information.

Processing of the Information

Low Commitment Consumers

Message Processing and Role of Diagnosticity. In the publicity setting, we would expect low commitment consumers to systematically process both positive and negative information. It has been demonstrated that source variables can themselves affect people’s motivation to engage in effortful processing. For instance, Heesacker, Petty & Cacioppo (1983) found that when subjects were moderately involved with an issue they were more likely to evaluate systematically a message presented by an expert than by a nonexpert (see also Puckett, Petty, Cacioppo & Fisher 1983). Kelman (1958; 1961) suggested that the extent to which a source can and does influence the perceived importance and relevance of a persuasion situation depends on the extent to which the needs of the message recipient match the potential rewards that a message source can offer. DeBono & Harnish’s (1988) results suggest that when such a match does occur, individuals become motivated to systematically process the message. DeBono & Harnish found that high self monitoring individuals (who are concerned that their beliefs are the
appropriate ones to hold given their social circumstances) directed attention to the message content when an attractive source presented the message, whereas low self-monitoring individuals (who are concerned that their attitudes express important values) were motivated to process the message elaborately when an expert source presented the information.

Our message recipients are expected to be motivated to form valid attitudes (Petty & Cacioppo 1986a & b). Publicity information is considered to be very credible and relatively unbiased by consumers (Belch & Belch 1995; Shimp 1990), and therefore, relevant for the goal of forming valid attitudes. Thus, we expect that low commitment consumers will be motivated to process the publicity information elaborately.

When message recipients engage in objective elaboration of the message the amount of counterargumentation is likely to be related to the argument quality and not the position of the message (Petty & Cacioppo 1986b). Given that the messages were equal in strength (positive rated as +3.8 and negative rated as -3.4, in a pretest), we would not expect any differences in the number of counterarguments that these consumers generate in response to the two messages.

H3: Low commitment consumers are not expected to have significantly different number of counterarguments in the positive as compared to the negative condition.
Since consumers exposed to both positive and negative information are expected to process the target information elaborately, we argue that it is not the amount of thinking (or elaboration) but the perceived relevance of the information (i.e. its diagnosticity) to the decision at hand that is expected determine its relative impact on the publicity information processing outcome (e.g. see MacKenzie & Spreng 1992). So, negative publicity is weighted more than positive publicity information not because it receives more attention and more elaboration (the novelty explanation, Fiske 1980), but because it is perceived to be more relevant (diagnostic) for categorizing the target brand (the category diagnosticity explanation, Skowronski & Carlston 1987).

We have some preliminary evidence that the diagnosticity results from the impression formation paradigm may be transferable to the publicity setting\(^1\). We expect low commitment consumers to perceive negative information as more diagnostic than positive information. Further, the perceived diagnosticity of the negative publicity message, and not the amount of attention/elaboration that it receives, is expected to lead to attitude change for these consumers, when they are exposed to negative information.

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\(^1\)In a pre-test conducted to specifically test for this issue, we found the diagnosticity effect to be generalizable to the publicity situation. When subjects saw only one piece of information, either negative or positive, about an unknown brand, they still reported perceiving the diagnosticity of negative information as higher than the diagnosticity of positive information (p<0.05)
H4(a): The low commitment consumers will perceive negative publicity as more diagnostic than positive publicity.

H4(b): The amount of elaboration low commitment consumers engage in (total message related thoughts and recall index) will not be significantly different when they are exposed to negative as opposed to positive information.

H4(c): The perceived diagnosticity of the negative publicity information will be a significant predictor of attitude change for low commitment consumers exposed to negative information.

Weighting versus Perception of the Information. Most of the past research dealing with negative information has assumed that negative information gets more weight than positive information. In this research, the scale value (or the meaning) of the information is assumed to be the same for subjects in different conditions (e.g. Anderson 1965; Birnbaum 1972; Skowronski & Carlston 1987). We argued in the previous chapter that there is reason to question this assumption (e.g. Abele & Petzold 1994; Petty 1994) and suggest that the priors of a subject may impact their perception of the information (e.g. Dawson et al 1972; Hovland & Sherif 1952). However, as we will argue later, we expect biased perception of publicity information, only with the high commitment consumers. We do not have any reason to expect that low commitment consumers will also engage in biased perception of the publicity information. For this group of consumers, we expect the assumption made in the past literature that negative information is weighted more than positive information, and that consumers perceive the
meaning of the information in an unbiased manner, to hold. We make this argument on the basis of the following reasons.

Firstly, the limited research, that exists, on the perception of information suggests that when subjects have strong priors (e.g., their prior attitudes, beliefs, etc.) they may be likely to engage in biased perception of the target information (e.g. Hovland & Sherif 1952; Lord, Ross and Lepper 1979). Given that the prior commitment of these consumers towards the brand is low, we would not expect them to show any biases in the perception of negative and positive publicity information.

Secondly, a case for the extreme/biased perception of negative as compared to positive information could be made if these consumers engaged in different amounts of thought when exposed to positive as compared to negative. Past research has shown that increased thought can lead to attitude polarization effects (Tesser 1978; Tesser & Leone 1977). For instance, Millar and Tesser (1986) found that when subjects were given a moderately positive trait description for a previously evaluated individual, and asked to think about it, their attitudes towards the individual polarized. However, this reasoning also does not appear to be valid in this case. As discussed in the previous section, we don’t expect low commitment consumers to elaborate more on negative as compared to positive information.
Therefore, we have no reason to expect that these consumers will perceive negative and/or positive information in a biased manner. However, we do expect the low commitment consumers to give more weight to negative as compared to positive information since negative information, since it is considered to be more diagnostic (Fiske 1980; Kanouse & Hanson 1972; Skowronska & Carlston 1987; Wojciszke et al 1993).

**H5(a):** Low commitment consumers will give more weight to negative information as compared to positive information in forming their attitudes towards the target brand.

**H5(b):** Low commitment consumers will not perceive the meaning of the publicity information in a biased manner, when forming their attitudes towards the target brand.

**High Commitment Consumers:**

**Message Processing.** Past research suggests that consumers who are high in commitment towards a brand are expected to resist counterattitudinal information and therefore resist attitude change (e.g. Brehm & Cohen 1962, Kiesler 1971; Eagly & Chaiken 1993). However, as we discussed in the previous section there are a variety of mechanisms by which these consumers can try to defend their initial attitudes. Two major hypotheses have been proposed: selective perception (Crosby & Taylor 1983; Sweeney & Gruber 1984) and defensive processing (Eagly & Chaiken 1993; Petty & Cacioppo 1986a & b).
The question we face, then is, which of these two processes (defensive versus selective perception) are the highly committed consumers likely to engage in when they are exposed to negative publicity information. We predict that the former effects (i.e. increased defensive processing of the information) are more likely in the product context than the latter effects (i.e. selective avoidance of inconsistent information), when consumers are faced with negative information about a brand towards which they are committed. In the product context, the negative product/brand related information is likely to be high in utility in relation to goal attainment (i.e. future purchase decisions). Therefore such information is likely to be given more attention than attitude congruent information. Our rationale is consistent with Festinger (1964) when he argues that dissonant information may sometimes be useful in relation to future decisions and therefore not avoided (and perhaps preferred). Therefore, given that negative product related information is likely to be relevant to future decisions, we would expect high commitment consumers to process it elaborately and not attempt to avoid it. However, this processing is likely to be defensive given their high levels of commitment towards the brand.

If high commitment consumers selectively avoid negative publicity about the target brand, they would be expected to have lower recall of that information and fewer message related cognitive responses compared to the positive information condition.
However, if the high commitment consumers engage in defensive processing, they would have equal or greater recall and message related cognitive responses when compared to the positive information condition.

Further, when a message recipient engages in defensive processing (high commitment consumers) the number of counterarguments generated and the level of message agreement expressed are likely to depend upon the position of the target message (Petty & Cacioppo 1977; 1986b). When defense motivated message recipients are presented with a proattitudinal message, they are likely to express fewer counterarguments and greater agreement with the message, than when exposed to a counterattitudinal message. Therefore, we would expect high commitment consumers to have significantly greater counterarguments when exposed to the negative as compared to the positive message, if they were engaging in defensive processing of the publicity information.

And finally, if consumers are engaging in defensive processing, or intensive elaboration of both the negative and positive publicity messages, we would expect their net agreement thoughts (pro-message thoughts minus anti-message thoughts) to be a significant predictor of attitude change.

H6(a): When exposed to negative information, high commitment consumers will have equal or greater message related cognitive responses as compared to high commitment consumers exposed to positive information.
H6(b): When exposed to negative information, high commitment consumers will have equal or greater recall of the target information as compared to high commitment consumers exposed to positive information.

H6(c): When exposed to negative information, high commitment consumers will have significantly more counterarguments, as compared to high commitment consumers exposed to positive information.

H6(d): Net agreement thoughts are expected to be a significant predictor of attitude change for high commitment consumers.

**Role of Diagnosticity.** The next question relates to the role of perceived diagnosticity in the processing of negative versus positive information for high commitment consumers. Would high commitment consumers also *perceive* negative information to be more diagnostic than positive information? We know that perceived (as opposed to objective) diagnosticity determines the likelihood of information utilization (Feldman & Lynch 1988). A person’s goals are likely to determine what he/she may consider to be diagnostic (e.g. Lynch et al 1988). For instance, if a person is accountable for a product selection, he/she may examine an input’s relevance for choice in terms of the input’s potential to determine a choice that would make others happy. However, if his/her goal was to make the best selection for himself/herself, then an input’s diagnosticity for choice would be evaluated in terms of it’s ability to identify an optimal product.
Further, depending upon the goals of the consumers, inferential biases are also possible, where consumers overestimate or underestimate the diagnostic value of a given piece of information (Herr, Kardes & Kim 1990). Therefore, it is likely that a biased perceiver may rate information that helps him/her achieve his/her goal, as more diagnostic than information that doesn’t do the same. Therefore, high commitment consumers, whose goal is to resist counterattitudinal information and defend their attitudes, are expected to underestimate the diagnosticity of the counterattitudinal (goal inconsistent) information and overestimate the diagnosticity of the proattitudinal (goal consistent) information. Perceiving negative information as less diagnostic helps them achieve their goal of defending their existing attitudes (as opposed to the goal of forming valid attitudes of the low commitment consumers). Therefore, for high commitment consumers we could expect a reversal effect: positive information perceived as more diagnostic than negative information.

Thus, diagnosticity is expected to play a different role for high and low commitment consumers. For low commitment consumers (whose goal is to form valid attitudes) negative information is perceived to be more diagnostic than positive information, because it helps the consumers discriminate between alternative categories better. The perceived diagnosticity of the information is expected to predict attitude change for these consumers. However, in contrast, high commitment consumers (whose
goal is to defend their existing attitudes), are likely to overestimate the diagnosticity of
the attitude consistent message (positive), and underestimate the diagnosticity of the
attitude inconsistent information (negative). Therefore, for the high commitment
consumers, perceived diagnosticity of the information is as much an outcome of message
processing as attitude change. Therefore, we do not expect the perceived diagnosticity of
the publicity information to mediate attitude change for these consumers.

H7(a): The high commitment consumers are expected to perceive positive
publicity as more diagnostic than negative publicity information.

H7(b): Perceived diagnosticity of the presented information is not expected to be
a significant predictor of attitude change for high commitment consumers.

Role of Weighting versus Perception. As discussed in the literature review
chapter, not only do we expect high commitment consumers to weight negative
information more than positive information, we also expect them to perceive the meaning
(or scale value) of the publicity information in a biased manner. These consumers are
expected to perceive the counter-attitudinal negative information as less negative and the
pro-attitudinal positive information as more positive, than the more objective low
commitment consumers. We will explain our rationale for these predictions in the
following paragraphs. We will discuss our rationale for the overweighting of positive
information first and then go on to discuss the issues related to the perception of the publicity information.

High commitment consumers are likely to resist the negative publicity information (Keisler 1971; Pallak et al 1972). Cognitive processes like counterargumentation and bolstering, that these consumers engage in, are expected to impact the weight they give to negative information. The process of counterarguing the information is expected to help the consumers discount the negative information, and therefore, give less weight to it. Bolstering (Abelson 1959, 1968; Festinger 1957) consists of adding consistent elements to an existing, inconsistent structure, and is expected to dilute the magnitude of the inconsistency by reducing the proportion of dissonant relations among the perceiver's accessible cognitions. The bolstering process, by making other positive cognitions accessible, is also likely to decrease the amount of weight given to the negative information.

On the other hand, when highly committed individuals are exposed to positive publicity about the target brand, they are expected to pay close attention to (Bazerman, Beekum & Schoorman 1982; Crosby & Taylor 1983) the positive attitude consistent information and elaborate on in an attitude consistent fashion. This would result in increased weighting of the positive information. Thus, these consumers are expected to give more weight to positive as compared to the discounted negative information.
H8: High commitment consumers will give more weight to positive as compared to negative information in forming their attitudes towards the target brand.

There is some evidence in the literature that the meaning of a presented piece of information may be perceived differently by people, depending upon their prior beliefs and attitudes. For instance, research in the area of Thurstone scaling demonstrated that judges' attitudes influence the perceived position of attitudinal statements (e.g. Eiser 1971; Manis 1960; Zavolloni & Cook 1965). Research has shown that judges with more extreme attitudes viewed statements that were relatively distant from their own position as more extreme than did judges whose attitudes were more neutral (e.g. Dawes, Singer & Lemons 1972). Further, Lord, Ross & Lepper (1979) made subjects who supported the capital punishment and subjects who opposed it, read reports portrayed as empirical studies on capital punishment. They found that both the proponents and opponents of capital punishment rated the report that confirmed their own views as more convincing and better conducted than one that disconfirmed their views. Commitment, like prior attitudes and prior beliefs, is also likely to impact the perceivers motivation to defend their attitude, and therefore, expected to lead to biased perception of the target information.

Therefore, consistent with the findings of the above research we would expect that high commitment consumers, when exposed to negative information, will perceive the
attitude inconsistent information as *less* extreme (or less negative) than it is perceived by low commitment consumers. Similarly, these consumers are expected to perceive the attitude consistent positive information as *more* extreme (or more positive) than it is perceived by the relatively objective low commitment consumers.

H9: High commitment consumers will perceive

(a) negative publicity information as *less* negative toward the brand than the low commitment consumers.

(b) positive publicity information as *more* positive toward the brand than the low commitment consumers

We will discuss the measures that we use to estimate the weight and perception of the information in the methodology section. There are problems associated with using the currently accepted functional methodology (Anderson 1981) and therefore, we have developed our own measures, as discussed in the methodology section.

**Conclusion**

Thus, negative information can have a wide range of effects on consumers. This prediction undermines the popular belief that negative publicity is almost always very harmful (e.g. see Herr et al 1990; Pearson & Mitroff 1993; Weinberger et al 1991). Further, the way in which negative information is processed is expected vary too. The
perceived diagnosticity of the publicity information is expected to be an important predictor of attitude change for the low commitment consumers. These consumers are expected to elaborate on the publicity information objectively. Given, that these consumers are likely to elaborate on both the negative and positive information, we expect the perceived diagnosticity and not the amount of elaboration (or attention) to predict attitude change for these consumers. The negative information is likely to be weighted more than positive information, but not perceived differentially and/or in a biased manner.

The high commitment consumers, on the other hand, are expected to engage in defensive processing of the publicity information. This defensive processing is expected to not only impact the weight given to negative information, but also bias the perception of the publicity information. Further, contrary to the low commitment consumers, these consumers are expected to perceive positive information as more diagnostic than negative information. The perceived diagnosticity is not expected to be a significant predictor of attitude change. However, net agreement thoughts are likely to be a significant predictor of attitude change. Please see Figure 3 for our integrative model of negative information processing.

We argue that understanding the effect of negative information, on this spectrum of processing conditions, is important not only from a theoretical but also from a practical
point of view. A better understanding of consumer processes under different conditions is likely to help not only in assessing the level of damage inflicted by negative information, but also in the formulation of response strategies to deal with these effects.

Figure 3: An Integrative Model of Market Related Negative Information Processing
METHODOLOGY

Design:

To test the proposed hypotheses, a 2 (commitment: high and low) x 2 (valence: positive and negative) between subjects design was implemented.

Subjects:

At the beginning of the quarter, all the students in an introductory marketing class were administered a mass-testing questionnaire. Embedded among 100 other questions were three questions measuring their commitment and four questions measuring their attitude towards the target brand. Subjects were recruited over the phone, later in the quarter, on the basis of their commitment and attitude scores. Subjects were given a sum of $4.00 and extra credit in the marketing class for participating in this experiment. The monetary inducement was added to ensure high acceptance rate, given that the subject pool that met our requirements (commitment levels and attitude scores) was very small and we needed at least 85% acceptance rate to get an adequate sample size. Thirty four high commitment and 34 low commitment subjects participated in the experiment.
Procedure:

On their arrival, subjects were told that they were participating in a media study being conducted by the Department of Marketing in collaboration with the School of Journalism. Their task was to evaluate some recent newspaper articles related to different products. The subjects were then given a folder which contained six newspaper articles - three of which were negative (N) and three of which were positive (P) towards the product/brand featured in them. The subjects were asked to read through the articles at their own pace, just as they would read articles in a newspaper. In the negative target article condition, the sequence of articles was (N, P, P, N_target, P, N). In the positive target article condition, the sequence of articles was (N, P, N, P_target, P, N). The first, second, fifth and sixth article were always the same. The fourth article was always the target article. The only article that changed with the target article was the third article, which was positive when the target article was negative and was negative when the target article was positive. This was done to ensure that subjects in all the conditions saw three positive and three negative articles.

Subsequent to reading the articles, the subjects were given the dependent measures questionnaire. They were told that in the interest of time, each of them would be randomly asked to evaluate only one of the articles they saw. The second page of their questionnaire told them which article they had been assigned (all subjects were told
that they had been assigned the target article). The dependent measures started with a
cognitive response task, followed by the attitude measures and the rest of the dependent
measures. Once they had completed the questionnaire, subjects were debriefed. They
were told why the study was conducted. They were informed that materials that they read
in the experiment were fictitious and had been made up for the purpose of this
experiment. They were specifically directed to the target article and told that it was not
based on any actual facts, and was entirely made up by the experimenters and therefore
should be totally discounted by them. Subjects were then quizzed on whether they had
guessed the purpose of the experiment and if they had suspected that the articles were
fictitious. None of the subjects had guessed the purpose of the experiment. Only 5 out of
68 subjects said that they had suspected that the articles may have been “made up”. The
number of subjects who suspected that the articles may have been made up were not
significantly more (or less) in any one condition. Subjects were then cautioned not to
disclose the purpose of this experiment to the other students in their class.

Independent Variables:

Commitment. Commitment of the subjects’ towards the target brand was
measured via the three item brand commitment measure proposed and tested by Beatty,
Kahle and Holmer (1988) and used by Beatty and Kahle (1988). Consumers falling in the
upper third of this scale were categorized as high in commitment, and those falling in the
lower third were categorized as low in commitment. It was felt that it would be difficult to manipulate in a laboratory the complex patterns of commitment that develop over time with a brand. Further, it was felt that measuring, rather than manipulating, commitment would add ecological realism to the study of the effects of commitment on the processing of negative publicity. Most of the well-accepted manipulations of commitment in social psychology (e.g. advocating a position publicly) aren’t very consistent with the publicity domain. Further, these manipulations seemed to lack the ability to adequately capture the richness of the commitment construct in a product setting.

The risk with measuring commitment, of course, is that other unmeasured factors associated with different levels of commitment may provide alternative explanations for the results. Our pretests, using two product categories (athletic shoes and soft drinks) revealed moderate but significant correlation between prior attitudes and commitment ($r_{shoe}=0.46, p<0.001, n=455$; $r_{drink}=0.50, p<0.001, n=455$) and product class involvement and commitment ($r_{shoe}=0.37, p<0.001, n=430$; $r_{drink}=0.30, p<0.001, n=420$). We decided to control for prior attitude towards the brand, in our experiment, by equating the two groups of consumers (high and low commitment) on this variable. Therefore, in our experiment, we only recruited high and low commitment consumers whose prior attitude towards the target brand were equal ($\text{Mean}_{low}=7.71, \text{Mean}_{high}=7.62, p<1$). Further,
product class involvement of our subjects was measured and used as a covariate in our experiment.

Selection of the product category and brand. A major criterion for selecting the target product category was the dispersion of commitment scores in it. The wider the distribution, the more likely it was that we could identify and recruit enough high and low commitment consumers for our experiment. We pretested the distribution of commitment scores for various product categories (including fast food, soft drinks, athletic shoes) in our subject pool, and found athletic shoes to be the category with the widest dispersion among these products.

Our next concern was identifying the target brand in that product category. Two major criteria for this selection were: (I) a wide distribution of commitment scores, and (ii) a narrow distribution of attitude scores. This would make it possible to recruit people with the similar initial attitudes but different levels of commitment, for our experiment. In a pretest, we measured the attitudes and commitment scores of our student population for various brands of athletic shoes. Nike was identified as the target brand, which met these requirements (Standard deviation$_{\text{commitment}}$=2.2; Standard deviation$_{\text{attitude}}$=1.2; n=456).

Valence of the message. Our second independent variable was the valence of the message: negative or positive. The target messages, were developed thorough a series of pretests. Both positive and negative versions of the message dealt with information about
the same attribute to avoid confounding attribute importance with weight. In a pretest, 42 subjects were asked to rate the importance of various attributes, when considering the purchase of a shoe. Shock absorption was rated to be relatively important by the subject population (Mean=7.21 on a 9 point scale). Positive and negative messages focusing on this attribute were developed in the form of a newspaper article. In the negative version of the message, the target brand was reported to result in the increase of arthritis because of it's defective shock absorption mechanism which transferred the shock from the ankle to the knee instead of absorbing it. In the positive version of the article, the target brand was reported to prevent the incidence of arthritis because of its high levels of shock absorption. The messages (which, at this stage did not identify the brand name, but referred to it as X) were rated as equivalent in their believability (Mean\text{negative}=5.3; Mean\text{positive}=5.0, p<1), and were approximately equal in their length. Message valence was assessed by asking the subjects what their evaluation of the target brand featured in the message would be based on only the information contained in the message (Skowronski & Carlston 1987; Wojciszke, Brycz and Borkenau 1993). They rated the message on an 11 point scale ranging from -5 to +5. The messages were significantly different in their valence (Mean\text{negative}=-3.4; Mean\text{positive}=+3.8, p<0.001), but not in their polarity (Mean\text{negative}=3.4; Mean\text{positive}=3.8, p<1). Past research has labeled items falling within this range as extremely positive and extremely negative (Skowronski & Carlston
Consistent with past research we also consider these messages to be representative of extremely negative and extremely positive publicity information.

Six filler articles were also developed. These were based on real articles about actual products and brands published in major newspapers. They were modified for their length to fit the study. All the articles were edited to fit one page. Three of these articles were negative and three of them were positive towards the featured product.

**Dependent variables**

**Cognitive responses.** The dependent measures booklet started with the cognitive response task. Subjects were given 2.5 minutes to list all the thoughts they had while reading the target article (cf. Petty & Cacioppo 1977). Twelve 8 inch horizontal lines each approximately an inch from the one above were used to create the boxes in which subjects wrote their ideas, one per box. After completing the rest of the questionnaire, the subjects were instructed to go back to their cognitive responses and rate their ideas as either + (positive), - (negative) or 0 (neutral) towards the target brand. The subject’s thoughts were classified by two judges into four categories: counterarguments, support arguments, other message related thoughts, other thoughts (not related to the message). Message supportive arguments included statements of agreement with the message’s position and, generation of supportive facts and evidence. For example, “My podiatrist
was right, this isn't necessarily the best brand”, “It could be dangerous to wear these shoes”. Counterarguments included statements of disagreement or attacks on the message’s position, and generation of evidence and facts that undermine this position or are contrary to it. For example, “I have never had problems with this shoe”, “It is hard for me to believe that these shoes can cause arthritis”. Other message related thoughts included statements related to the message, but neither supportive nor against it. For example, “Were both males and females tested?”. Other thoughts included statements not related to the message. For example “I am hungry, should I go to Wendy’s or Rally’s”. There was over 90 percent agreement between the two judges, in classifying these thoughts. The disagreements were resolved via discussion. Net message agreement was computed by subtracting the counterarguments from the support arguments.

Attitudinal valence. Subjects were asked to rate the target product on four 9-point semantic differential scales (good-bad, beneficial-harmful, wise-foolish, and favorable-unfavorable), (coefficient alpha=.97). Using these measures a mean attitude score was computed. Mean attitude change was computed as the difference between the pre-message mean attitude (obtained during mass-testing at the beginning of the quarter) and the post-message mean attitude (measured during the study) for each subject.

Attitudinal Ambivalence. We used Kaplan’s (1972) technique to measure attitudinal ambivalence. In his 1972 article, not only did Kaplan develop his technique,
he also presented data supporting its reliability and validity. This technique gained popularity in the literature and has been used by other researchers for examining attitudinal ambivalence (e.g. Bargh, Chaiken, Govender & Pratto 1992). Kaplan's method includes the use of separate unipolar positive and negative scales for each item to be rated. Respondents were first instructed that people often have both positive and negative feelings towards people, issues, products etc., and therefore for the target brand they had to rate the extent to which they had positive feelings towards it and then, separately, the extent to which they had negative feelings towards it. Both the positive and negative scale consisted of four possible responses: not at all, slightly, quite, and extremely. From these separate scales indexes of ambivalence an polarization of attitudes were computed.

In order to compute the ambivalence scores, the responses from the positive and negative feeling scales were coded as 0(not at all), 1(slightly), 2(quite), or 3(extremely). The subject's degree of ambivalence towards the given object was computed by taking the sum of the positive and negative ratings of the attitude toward the object (this represents the total amount of affect toward the object, regardless of valence) and then subtracting the absolute value of the difference between the two scales. Thus, the ambivalence index represents the amount of precisely counterbalancing negative and positive affect toward the object. It can range from 0, in the case in which the response to one or both scales
was not at all, to 6, in the case in which the subject had both extreme positive and extreme negative feelings toward the object.

**Attitudinal Confidence.** Confidence of the subjects in their attitude was measured by a one item 9 point scale (*not at all confident*–*extremely confident*).

**Weights and Perceptions.** Generally functional measurement is used to estimate weights and scale values assigned to different attributes in Anderson's information integration paradigm (e.g. Anderson 1981; 1992). Anderson argues that functional measurement is preferred over self-estimates of these parameters because self-estimates tend to have questionable validity (Anderson & Zalinsky 1988; also see Hobbs 1980; Schoemaker & Waid 1982). For instance, it is common for judges to confound weight with scale value (Anderson & Zalinsky 1988; Surber 1985). Self estimate measures of value may not be interpretable at face value (Anderson & Zalinsky 1988). In some situations, the initial state variable or prior expectation, is averaged in with the value of each separate attribute level (Anderson 1981). In fact, Nisbett (Nisbett & Bellows 1977; Nisbett & Wilson 1977) have also made a strong case against using self-estimates of such variables in behavioral research. Further, the standard procedures of functional measurement are limited by their dependence on a factorial-type design, which is often impractical or infeasible, especially in more natural settings (e.g. using actual brands, one message etc.). Due to its limitations in these setting, this estimation approach is
incommensurate with our experimental design (different levels of commitment) and the
desire to maintain publicity relevant context. Therefore, given the methodological
constraints for using this approach, and the validity concerns with the self-estimate
measures, we have decided use indirect theory driven measures of scale values and
weights.

We decided to use a combination of indirect measures to estimate both the weight
given to and the perception of the information by consumers. Each of our measures is
derived logically from theory, and each makes different predictions, but points to the
same hypothesis. Thus, by obtaining convergence from multiple indirect theory driven
measures, we can place greater confidence in our propositions. Therefore, we use a
triangulation of measurement processes. Even though each of the single measures may be
attacked for weakness, but taken cumulatively they offer greater hope for validity than
any single measure, regardless of its popularity (Campbell & Fiske 1959; Webb et al

Some of the past research in marketing has used similar indirect measures. For
instance, Tybout, Strenthal and Calder (1983) used one such measure in their research
relating to multiple request effectiveness. The researchers were interested in measuring
the subjects' level of compliance to multiple requests. The target request in their
experiment comprised of drinking a moderately bad tasting beverage. Since it was felt
that subjects would feel obligated to agree to the experimenter's request to drink the beverage, the amount of the drink that the subjects consumed was used instead as a measure of compliance. Berger and Mitchell (1989), used an indirect measure of behavioral intention because they felt that it would provide a more accurate assessment of the construct than a self-report measure. They allowed their subjects to choose and keep seven of the candy bars that they had seen in the experiment. The number of candy bars taken by each individual was then used as a measure of behavioral intent.

**Measures of weight.** Past research shows that the level of thought given to and attention paid to a piece of information is related to the weight it gets in impression formation. More thought related to an argument generally leads to greater weighting (Fiske 1980; MacKenzie 1986). Thought can be classified into two components: it's direction and its amount. The weight that an argument gets depends upon the amount of directed thought it receives (i.e. thought in the direction of the position advocated by the argument) (MacKenzie 1986). Therefore, we use the amount of message consistent thought as an index of weight\(^2\). The more message supportive or consistent thoughts a

\(^2\)It could be argued intuitively that the number of support arguments may also influence the perception of the information. The more thought a consumer gives to a certain piece of information, it is possible the more extreme he or she perceives it to be. However, since past research has not clearly demonstrated this perception effect, we will assume (consistent with MacKenzie 1986) that the number of support arguments influences only the weight given to the information. However, when we do our analysis, we will compare the pattern of results obtained with this measure to the results obtained from the two perception measures and the one other weight measure used in the study. If the pattern is
subject has, the more heavily he/she is likely to weight the message. For instance, if high commitment consumers are expected to weight positive information more than negative information, they should have more message supportive thoughts in the positive message as compared to the negative message condition.

Our second measure of weight is a word-of-mouth measure. We asked the subjects to list all the information, related to the target brand, they would give to a friend who is in the market to buy a new pair of shoes. The percentage of people in each condition who mention the message-related information in their word-of-mouth communication is taken as an index of the weight they would assign to that information. This measure is based on the rationale that the more important a group of consumers consider a piece of information to be (or the more weight they give to it), the more likely they would be to mention it to others in their word-of-mouth communication. On the other hand, information that is not considered important is not likely to be mentioned in this communication.

Measures of Perception. Biased perception implies that people are perceiving the presented information as more or less negative (positive) than an objective perceiver would. A well accepted manifestation of bias, in the literature, is over- and under-

different from the perception measures but similar to the weight measures we will be able to support the validity of this measure. However, if the pattern of results is consistent with the two perception measures and different from the weight measure, we will conclude that support arguments is not a clean measure of weight.
estimation of the information in a manner that is consistent with one's predispositions (e.g. Webb et al 1981). Our first measure of perception is based on this rationale. We embedded two numbers in the target message. Biased perception would imply that when asked to recall these numbers, people would have a tendency to over- or under-estimate them in a pattern consistent with their perception of the information. These numbers were deliberately chosen in such a way that biased perception implied over-estimation for one and under-estimation for the other number. This was done to insure that results were not due to a systematic tendency of one group of consumers to over- or under-estimate the target information. These numbers were (a) the number of years it took to develop the problem (negative condition) or to reap the benefit (positive condition) associated with the shoe (b) the percentage by which the incidence of the problem was enhanced (negative condition) or decreased (positive condition) by wearing this shoe. Our reasoning was that if high commitment consumers perceived negative information as less negative than the low commitment consumers, they would systematically over-estimate (a) (the number of years it took to develop the problem), and under-estimate (b) (the percentage by which the incidence of the problem was increased). Objective or unbiased perception, on the other hand, would imply random over- and under-estimation, therefore, no systematic differences in under- and over-estimation for both the numbers.
Our second measure was a rank order measure. Subjects in our study were shown three positive and three negative articles (one of which was the target article). They were asked to rank order all the positive articles in terms of their favorableness toward the product featured in them. They were also asked to rank order all the negative articles in terms of their unfavorableness toward the product featured in them. If a significantly higher proportion of consumers in one group as compared to the other group, rated the target article as the most favorable (or unfavorable) article, then one could infer that the message is being perceived differentially by the two groups. This measure was based on the rationale that the ranking a consumer assigns to the message reflects his/her perception of it. Therefore, given the same target message and identical filler messages, the consumer who perceives the target information as more positive than others do, is likely to rank this message higher in favorableness than consumers who do not perceive it to be as positive.

Recall Index. Subjects were asked to recall the reason underlying the problem (negative condition) or the benefit (positive condition) associated with the shoe, i.e. increase (decrease) in arthritis. This was used as a measure of attention given to the message. It was reasoned that the consumers would have to have read the message carefully to remember the exact reason given for this problem/benefit. If they had just skimmed through the article, they would not be likely to remember this. The response to
this question was then coded as 1 if they recalled the reason and 0 if they did not recall the reason.

**Diagnosticity.** Our measures of perceived diagnosticity were based on Skowronski and Carlston (1987) and Herr, Kardes & Kim (1990). Subjects were asked to estimate the percentage of high- versus low-quality shoes likely to have a problem with the target attribute (shock absorption) and the percentage of high- versus low quality shoes likely to have a high (good) level of shock absorption. Low quality was defined as average or low quality to ensure that mutually exclusive and exhaustive categories would be employed. To compute the cue validity or diagnosticity index, ratios using these estimates were computed. The diagnosticity of negative information is computed by dividing the perceived probability of a low quality shoe having the problem by the sum of the same probability and the probability of a high quality brand having that problem. Similarly, the diagnosticity of positive information is computed by dividing the probability of a high quality brand having the benefit by the sum of the same probability and the probability of a low quality brand having that benefit.
RESULTS

In this section we will present the results of the first experiment. Analysis of Variance was used to test for most of the hypotheses. Regression was used to test H4(b), H6(d) and H7(b). One tail tests were used to test for the directional orthogonal a priori contrasts. The error term used for t-tests was the Mean Squared Error from the ANOVA table. The degrees of freedom used for each contrast were \((n_1 + n_2 - 2)\). All the F-tests used 1 (numerator) and 64 (denominator) degrees of freedom.

Attitude change

We hypothesized that low commitment consumers would exhibit greater attitude change with negative as compared to positive publicity information (H1a), and high commitment consumers would be expected to show greater attitude change with positive as compared to negative publicity (H1b). This would imply a significant interaction of commitment and valence on attitude change. Our hypothesized contrasts deal with absolute attitude change rather than actual attitude change. Therefore, these contrasts will be performed on the absolute value of the mean attitude change.

A two (commitment) by two (valence) ANOVA was run on attitude change. As predicted, there was a significant interaction between commitment and valence for attitude change \((F_{(1,64)}=4.01, p<0.05)\). The main effects of commitment \((F_{(1,64)}=17.70,\)
p<0.001) and valence on attitude change (F_{(1,68)} = 29.84, p<0.001) were also significant.

Low commitment consumers expressed significantly greater attitude change with negative as compared to positive information (Mean\textsubscript{negative} = 1.69, Mean\textsubscript{positive} = 0.07, t\textsubscript{53} = 5.26, p<0.001). For high commitment consumers, there was marginally more attitude change with positive (Mean\textsubscript{positive} = 0.66) as compared to negative (Mean\textsubscript{negative} = 0.24) publicity information (t\textsubscript{53} = 1.37, p<0.10).

**Attitudinal Ambivalence and Confidence**

We expected the low commitment consumers to exhibit significant differences in attitudinal ambivalence and attitudinal confidence, when they were exposed to negative as compared to positive publicity information. These consumers were expected to have more ambivalent and less confident attitudes with negative as compared to positive information (H2a). However the high commitment consumers, were expected to have predominantly positive elements associated to their attitudes, in both positive or negative conditions. Therefore, they were not expected to have significant differences in attitudinal ambivalence and confidence in the two conditions. This pattern of results calls for a significant interaction between commitment and valence.

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3The same analysis was conducted using product class involvement as a covariate. The covariate was significant (p<0.01). However, the pattern and significance of the results was unchanged. A second analysis of covariance was conducted using post message attitude scores as the dependent variable, and prior attitude as the covariate. The covariate was significant (p<0.01). However, once again, the pattern and significance of the results was unchanged.
Two by two analyses of variance were conducted on attitudinal ambivalence and attitudinal confidence. The commitment by valence interaction was marginally significant for attitudinal ambivalence (F=4.10, p<0.10). There was a significant main effect of valence (F=7.08, p<0.05) for attitudinal ambivalence. However, the commitment by valence interaction was not significant for confidence (F<1). The main effects for commitment (F=10.36, p<0.05) and valence (F=8.15, p<0.05) were significant for attitudinal confidence.

Our contrasts were as predicted and supported both the hypotheses H2(a) and (b). The attitudes of low commitment consumers were significantly more ambivalent \( (\text{Mean}_{\text{negative}}=2.47, \text{Mean}_{\text{positive}}=1.33, t_{33}=2.74, p<0.01) \) and less confident \( (\text{Mean}_{\text{negative}}=6.59, \text{Mean}_{\text{positive}}=7.50, t_{33}=2.11, p<0.025) \) when they were exposed to negative as compared to positive publicity information. For the high commitment consumers, there were no significant differences in ambivalence \( (\text{Mean}_{\text{negative}}=1.53, \text{Mean}_{\text{positive}}=1.38, t_{31}=0.36, p<1) \) and confidence \( (\text{Mean}_{\text{negative}}=7.59, \text{Mean}_{\text{positive}}=8.06, t_{31}=1.08, p<1) \) when these consumers saw negative as compared to positive publicity information.
Thus, our results support the view that negative information is more impactful than positive information for only low commitment consumers. When it comes to high commitment consumers, not only do they exhibit lesser attitude change with negative as compared to positive information, the stability and confidence of their attitudes is also unaffected by the valence of the information.
Table 1

Source Table for Analysis of Variance on Attitude Measures

<table>
<thead>
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<th>Effect</th>
<th>F</th>
<th>Degrees of Freedom</th>
<th>p&lt;</th>
</tr>
</thead>
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<tr>
<td><strong>ATTITUDE CHANGE</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
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<td>1, 64</td>
<td>0.001</td>
</tr>
<tr>
<td>Valence</td>
<td>37.39</td>
<td>1, 64</td>
<td>0.001</td>
</tr>
<tr>
<td>Commitment X Valence</td>
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<td>1, 64</td>
<td>0.05</td>
</tr>
<tr>
<td><strong>ATTITUDINAL AMBIVALENCE</strong></td>
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</tr>
<tr>
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<td>1, 64</td>
<td>0.13</td>
</tr>
<tr>
<td>Valence</td>
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<td>1, 64</td>
<td>0.03</td>
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<td>1, 64</td>
<td>0.10</td>
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<tr>
<td><strong>ATTITUDINAL CONFIDENCE</strong></td>
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<tr>
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<tr>
<td>Valence</td>
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<td>1, 64</td>
<td>0.03</td>
</tr>
<tr>
<td>Commitment X Valence</td>
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<td>1, 64</td>
<td>0.48</td>
</tr>
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</table>
Cognitive Responses:

**Message Related Thoughts.** Message related thoughts were used as an index of elaboration to test two different hypotheses. We had hypothesized that low commitment consumers would not elaborate more on negative as compared to positive information (H4b). This result was expected to support the assertion that the impact of negative information on low commitment consumers is not due to the enhanced elaboration of negative information but because of higher perceived diagnosticity of negative information. For the high commitment consumers total message thoughts were used to test the selective perception versus the defensive processing hypotheses. It was postulated that if the high commitment consumers were selectively avoiding the negative information, then we would find fewer message related cognitive responses in the negative as compared to the positive condition. On the other hand, the defensive processing hypothesis would call equal or greater number of total message related thoughts for the negative condition (H6a). Therefore, we are interested in examining the two contrasts implied by these hypotheses.

A two by two ANOVA was run on the total message thoughts. The interaction between commitment and valence was not significant, nor were any of the main effects. Our contrast for the low commitment condition supported the hypothesized effect. The total message related thoughts were not significantly higher for the low commitment
consumers exposed to negative (Mean=4.65) as compared to positive (Mean=4.72) publicity. Thus indicating that low commitment consumers did not tend to elaborate more on negative as compared to positive publicity information.

The total message related cognitive responses of high commitment consumers exposed to negative information (Mean=5.06) were not significantly lower than those of high commitment consumers exposed to positive information (Mean=4.38). This finding supports the defensive elaboration hypothesis for the high commitment consumers as opposed to the selective avoidance hypothesis.

**Counterarguments.** The low commitment consumers were postulated to engage in objective processing of the publicity information, therefore, we would not expect significant differences in the number of counterarguments generated by them in the positive as compared to the negative information conditions (given that the two messages were equally strong) (H3). For the high commitment consumers, we expected a significant difference in counterarguments, since they are expected to engage in defensive processing of the publicity information. Consistent with defensive processing hypothesis we expected the consumers exposed to negative publicity to generate significantly higher number of counterarguments than those exposed to positive publicity (H6c). This pattern of results would call for a significant interaction between commitment and valence.
The commitment by valence interaction was significant for counterarguments ($F=26.41, p<0.001$). The main effect for valence was also significant ($F=42.94, p<0.001$). Both of the expected results were supported. The high commitment consumers had significantly more counterarguments when they were exposed to the negative as compared to the positive message ($\text{Mean}_{\text{negative}}=3.59, \text{Mean}_{\text{positive}}=0.75, t_{31}=5.85, p<0.001$). For the low commitment consumers, however as predicted, there were no significant differences in counterarguments between the positive and the negative message conditions ($\text{Mean}_{\text{negative}}=2.18, \text{Mean}_{\text{positive}}=1.83, t_{33} <1$). This data was consistent with the defensive elaboration hypothesis for high commitment and objective elaboration hypothesis for low commitment consumers.

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Figure 6: Counterarguments with negative and positive information for high and low commitment consumers.
Table 2

Source Table for Analysis of Variance on Counterarguments

<table>
<thead>
<tr>
<th>Effect</th>
<th>F</th>
<th>Degrees of Freedom</th>
<th>p&lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commitment</td>
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<td>1, 64</td>
<td>0.64</td>
</tr>
<tr>
<td>Valence</td>
<td>21.46</td>
<td>1, 64</td>
<td>0.001</td>
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<tr>
<td>Commitment X Valence</td>
<td>13.20</td>
<td>1, 64</td>
<td>0.001</td>
</tr>
</tbody>
</table>

Recall Index

One of our measures of amount of attention paid to the message was the percentage of consumers who recalled the reason for the problem/benefit stated in the message. For the low commitment consumers we had hypothesized that the attention paid to and the resultant elaboration of the negative message was not likely to be more than that of the positive message (H4c). For the high commitment consumers we had hypothesized that attention paid to the negative information would not be significantly less than the attention paid to the positive message (H6b). The latter pattern of results was expected to support the defensive processing hypothesis for the high commitment consumers. Thus, we will examine the two contrasts and test their significance using a Z-test of proportions.
The percentage of low commitment consumers recalling the reason for the benefit associated with the shoe, in the negative condition (P=88.2) was not significantly higher than in the positive condition (P=72.2, z=1.16, p>0.10). These findings lend support the objective processing of both negative and positive information by low commitment consumers.

When high commitment consumers were exposed to negative publicity, the percentage of consumers recalling the reason for the problem associated with the shoe was not significantly lower than the percentage of consumers who recalled the benefit, when they were exposed to positive information (P_{negative}=100, P_{positive}=93.75, z=-1.05, p<1). This pattern of data argued against the selective perception hypothesis, and provided more evidence in favor of the defensive processing hypothesis (H6b).

**Perceived Diagnosticity**

We had hypothesized that the low commitment consumers were likely to perceive the negative information as more diagnostic than positive information (H4a). However, the high commitment consumers were expected to show the opposite pattern of results, i.e. perceive positive information as more diagnostic than negative information (H7a). In our experiment, all the consumers (irrespective of whether they saw negative or positive target information) rated the perceived diagnosticity of negative as well as positive information relating to the target attribute. Therefore, we averaged the diagnosticity
scores for each level of commitment across the different levels of valence. That is, we calculated the diagnosticity index of negative information for low commitment consumers by averaging the diagnosticity ratings of all the low commitment consumers, irrespective of whether they saw the negative or positive information. Paired t-tests were then performed on the composite means obtained.

As hypothesized (H4a), and consistent with the past literature, low commitment consumers perceived negative information to be more diagnostic than positive information ($\text{Mean}_{\text{negative}}=0.70$, $\text{Mean}_{\text{positive}}=0.66$, $t_{35}=2.30$, $p<0.05$). A reversal was found, as predicted (H7a), for the high commitment consumers, with positive information being perceived as more diagnostic than the negative information ($\text{Mean}_{\text{negative}}=0.67$, $\text{Mean}_{\text{positive}}=0.72$, $t_{31}=3.47$, $p<0.001$). The diagnosticity values obtained appear to have face validity. Skowronski & Carlston (1987), in their study investigating diagnostics of extreme and moderate behaviors found similar magnitudes of diagnosticity estimates. Extremely negative behaviors (Mean=0.70) were more diagnostic than moderately negative behaviors (Mean=0.66).
Figure 7. Perceived Diagnosticity of Negative and Positive Information for High and Low Commitment

Weighting of the Information:

We expected low commitment consumers to weight negative information more than positive information (H5a). The reverse is expected for high commitment consumers: i.e. positive information is weighted more than negative information (H8). As discussed in the methodology section, we used two measures of weight in our experiment: message supportive thoughts and a word-of-mouth measure. We will use a two by two ANOVA to analyze the message supportive thoughts. We expect a significant interaction between commitment and valence for this measure. However, for the word-of-mouth measure we will compare the percentage of consumers who
mentioned the target information in their word-of-mouth communication, across the cells included in the contrasts. The contrasts will be made using a Z test of proportions.

**Message supportive thoughts.** The commitment by valence interaction was significant for message supportive thoughts ($F=26.81, p<0.001$). None of the main effects were significant. As hypothesized, for the low commitment consumers there were significantly more message supportive thoughts in (or more weight given to) the negative as compared to the positive information condition ($\text{Mean}_{\text{negative}}=1.94, \text{Mean}_{\text{positive}}=1.11$, $t_{33}=1.78, p<0.05$). A reverse effect was found, as predicted, for the high commitment consumers, with greater number of message supportive thoughts in the positive compared to the negative condition ($\text{Mean}_{\text{negative}}=0.94, \text{Mean}_{\text{positive}}=2.63$, $t_{31}=3.63, p<0.01$).

**Word-of-Mouth.** The percentage of subjects who mentioned the target information in their word-of-mouth communication was significantly lower with negative as compared to positive information for the high commitment consumers ($P_{\text{negative}}=47$, $P_{\text{positive}}=75$, $z=1.65$, $p<0.05$), indicating that negative information was given less weight than positive information by the high commitment consumers. However, contrary to expectations, the percentage of low commitment subjects who mentioned the information in the negative as compared to the positive condition was not significantly different ($P_{\text{negative}}=82.4$, $P_{\text{positive}}=77.8$, $p>0.60$).
Therefore, H8 was supported by both the measures, but there was mixed support for H5(a). It was supported by only the support arguments measure. It is possible that due to its recency of exposure, the target information was very accessible in the memory of the consumers (Fazio 1986). Since, unlike the high commitment subjects, the low commitment consumers are not likely to effortfully discount the negative information, they are more likely to exhibit a recency effect resulting in ceiling effects, with a very high percentage of consumers mentioning this information in their word-of-mouth, in both positive and negative conditions.

**Figure 8:** Support Thoughts with negative and positive information for high and low commitment consumers

**Figure 9:** Percentage of high and low commitment consumers who mentioned the target information in their word-of-mouth communication
**Perception of the Information:**

It was proposed that the low commitment consumers would not exhibit any biases in perception of the negative and/or the positive information (H5a). However, high commitment consumers were hypothesized to perceive the negative information as less negative and perceive positive information as more positive than the low commitment consumers (H9 a & b). We had used two different measures of perception of the meaning of the presented information, in our experiment. The first measure was a recognition measure. This measure attempts to estimate biases in perception of the information. The percentage of consumers over- and under-estimating the numbers embedded in the message were compared to detect biased versus objective perception of the information. The second measure was an article ranking measure. The percentage of consumers who rated the target article as the most favorable and/or most unfavorable were compared across the commitment conditions. Z-tests were used to test the significance of the contrasts used for both measures.

**Recognition Measures.** When high commitment consumers were exposed to negative information, as expected we found that a significantly higher percentage of consumers were overestimating than underestimating the number of years it took to get the problem ($P_{over} = 35, P_{under} = 0, z = 2.77, p < 0.005$). As predicted, a significantly higher proportion of people were underestimating as compare to overestimating the percentage
by which the incidence of the problem was increased ($P_{over}=0$, $P_{under}=18$, $z=1.90$, $p<0.05$).

It is noteworthy that none of the high commitment consumers exhibited a bias in the opposite direction, i.e. none were overestimating the percentage and none were underestimating the number of years. However, no such differences in the proportion of consumers over- and under-estimation were found for the low commitment consumers with both these measures (years: $P_{over}=23$, $P_{under}=12$, $z=0.87$, $p>0.20$; percent: $P_{over}=12$, $P_{under}=18$, $z=0.50$, $p<1$).

However, when consumers were exposed to positive information, we did not find any significant differences in the pattern of results obtained for high and low commitment groups. Nor did we find systematic over- and under-estimation by the high commitment consumers. Thus, it appears that high commitment consumers are likely to exhibit biases in perception only when it comes to negative information. The low commitment consumers, as predicted, don’t appear to engage in biased perception of the negative and/or positive information.

**Article ranking measure.** In the negative information condition we expected high commitment consumers to perceive the target information as less negative than the low commitment consumers. We found support for this hypothesis. A significantly lower proportion of high commitment consumers rated the target article as the most unfavorable article (or most negative in its implications for the target brand) among the 3 negative
articles they read, as compared to the proportion of low commitment consumers who rated it as the most unfavorable article ($P_{\text{high}}=23.5$, $P_{\text{low}}=53$, $z=1.83$, $p<0.05$).

However, when it came to positive information, we did not find any significant differences in the article ranking measure between high and low commitment consumers, indicating that the biased perception may be limited to negative information only ($P_{\text{high}}=12.6$, $P_{\text{low}}=16.7$, $p>0.90$).

This is consistent with our findings with the recognition measure. It appears that high commitment consumers perceive negative information as less negative than the low commitment consumers. However, when it comes to positive information, the high commitment consumers do not appear exhibit biased perception. This seems to be a reasonable finding, since negative information, which is threatening to high commitment consumer, is likely to generate a higher level of defensive processes (including biased perception) than the attitude consistent positive information. Therefore, only H5(a) and H9(a) were supported. H9(b) was not supported.

Regression Analysis.

A regression analysis was conducted to test whether diagnosticity was a significant predictor of attitude change for low (H4c) and not high commitment consumers (H7b) faced with negative information; and whether net thoughts were a significant predictor of attitude change for the high commitment consumers (H6d) who
saw negative publicity. Attitude change was regressed on net thoughts (T), the relative diagnosticity\(^4\) of the information (D), net thoughts by commitment interaction term (TC), and perceived diagnosticity by commitment interaction term (DC). The results of the regression analysis are displayed in Table III. As expected the perceived diagnosticity by commitment interaction term was significant, indicating that commitment moderated the impact of perceived diagnosticity on attitude change. The correlation coefficient of relative diagnosticity was significant for the low commitment (p<0.05) but not the high commitment consumers, indicating that perceived diagnosticity predicted attitude change for the low but not the high commitment consumers.

Net thoughts were a significant predictor of attitude change for both high and low commitment consumers (T was significant and TC was not significant). This finding supports the contention that both high and low commitment consumers were elaborating on message content. When message recipients engage in elaboration then the net thoughts are expected to be a significant predictor of attitude change (Petty & Cacioppo 1986).

Therefore, overall our regression results support the contention that for the low commitment consumers, perceived diagnosticity of the negative information as well as

\(^4\)The relative diagnosticity term was the standardized diagnosticity of negative information for these subjects. The diagnosticity values were standardized to minimize the large within subject variance. The diagnosticity of negative information was divided by the diagnosticity of positive information for each subject.
their thoughts are a significant predictor of attitude change. However, for high commitment consumers only net thoughts predict attitude change.

Table 3

Regression Analysis

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<th>Independent Variable</th>
<th>Standardized Regression Coefficient</th>
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<th>Significance of T</th>
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<td>Perceived Diagnosticity (D)</td>
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<td>0.65</td>
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<tr>
<td>(D) X Commitment</td>
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DISCUSSION

Overall, we find strong support for our hypotheses. Commitment emerges as a significant moderator of the impact of negative and positive publicity on consumers’ attitudes. This finding questions the popularly held belief that most consumers respond to negative publicity in a similar manner. It also questions the validity of using a mass approach in dealing with negative information in the marketplace. Further, in contrast to
the commonly found and well accepted negativity effect, we find a positivity effect for the high commitment consumers. Thus, we challenge, in many ways the popular beliefs related to negative information.

Our data supports the proposition that consumers high and low in commitment process information about the target brand differently. We find that high commitment consumers exhibit significantly lesser attitude change when exposed to a negative publicity message as compared to positive publicity. Both the measures of weight (support arguments and word-of-mouth) indicate that these consumers weight positive information more than negative information. We do not find any evidence of selective perception and avoidance by these consumers. In fact, contrary to avoiding negative information, these consumers seem to be engaging in higher elaboration of the negative message than consumers in any of the other conditions (highest number of message related cognitive responses and highest recall). Further, they generate significantly more counterarguments when exposed to the negative as compared to the positive message. This pattern of results provides evidence for defensive or biased elaboration by these consumers.

Our next stage of analysis indicates that defensive processing by these consumers does not simply imply weighting attitude consistent information more than attitude inconsistent information. These consumers also perceived the presented information in a
biased manner. Our measures of perception show convergent evidence of biased perception of negative information by these consumers. They systematically over- and under-estimate the numbers presented in the article, in the direction of their position. Further a significantly lower proportion of high commitment, compared to low commitment consumers, rank the target article as the most negative article in the set. It is interesting that this biased perception appears to be limited to negative information. When it comes to positive information, neither of our measures finds support for biases in perception. This is an interesting finding and we will discuss its implications later in this section.

In fact, the perceived diagnosticity of negative and positive information, is also reflective of biased perception. Contrary to the common finding of higher diagnosticity of negative information, these consumers perceive attitude consistent positive information to be more diagnostic than the negative information! For these consumers the diagnosticity of the message does not predict attitude change. Our regression analysis shows that net thoughts are a significant predictor of attitude change for these consumers whereas diagnosticity is not.

The low commitment consumers, on the other hand, show evidence of objective elaboration. They don’t seem to be counterarguing one type (negative or positive) of message more than the other. This is what we would expect from objective elaborators,
given that messages were equal in strength (Petty & Cacioppo 1977). The attitude change for these consumers appears to be operating mainly through changes in weights, with negative information getting more weight than positive information. We do not find any evidence for changes or biases in perception of the information by these consumers. Our data shows that they do not systematically over- or under-estimate the numbers provided in the article. Further, consistent with the commonly found negativity effect, they do perceive negative information to be more diagnostic than positive information. In fact, diagnosticity of the information, is a significant predictor of attitude change for these consumers. They appear to give more weight to the negative information, because of its higher perceived diagnosticity. These consumers don’t seem to elaborate more on negative as compared to positive publicity. They don’t have higher message related thoughts or a higher recall index when exposed to negative as compared to positive information. Therefore, the diagnosticity of the presented information instead of the amount of elaboration (or the attention paid to negative information), predict attitude change for these consumers. Our regression analysis shows that net thoughts are a significant predictor of attitude change for these consumers. However, this is to be expected since these consumers are engaging in message elaboration. Therefore, it is not the amount of elaboration but the direction of the elaboration that predicts attitude change for the low commitment consumers.
Our results do provide evidence for the biased perception of negative information by high commitment consumers, who engage in defensive processing. However, because this finding is only limited to the positive information condition, it raises more questions than it answers. What makes the condition of high commitment consumers faced with negative information special? What factors are likely to determine situations in which people will engage in biased perception? Are the weighting and perception processes sequential? It has been argued in the literature that when people respond to negative information or events that challenge their generally positive conceptions of themselves, they may try to reinterpret, distort or minimize the information so as to make it at least neutral (Taylor 1991). Thus, it appears that biases in perception arise only when the perceivers’ attitudes are threatened or challenged in a serious way. If information is consistent with their attitudes, such biases may not be operational. Our research, then identifies one condition in which biased perceptions are likely to result. It also shows that, in general, the assumption that differences in weights drive attitude change, holds.

The processing differences between these groups offer various directions for potential intervention by marketers. For instance, even though both high and low commitment consumers attempt to counterargue the message, the high commitment people are more successful at it (and therefore, able to resist the message better) because of their higher levels of motivation. They have significantly higher number of
counterarguments than the low commitment consumers. This difference provides a potential point of intervention by marketers. If the low commitment consumers, who are not motivated to expend the effort it takes to counterargue, are somehow made to counterargue more, they may be able to resist the negative information better. However, high commitment consumers who are already counterarguing spontaneously may not benefit much from a response that helps do the same.

Further, diagnosticity seems to predict attitude change for one group (low commitment) but not for the other group (high commitment). This difference opens up another avenue of responding to negative information, i.e. by lowering the diagnosticity of the presented information. This strategy would also be expected work differentially for the two groups of consumers. Similarly other potential interventions can also be identified. The point we are making is, that by examining these processes and the differences among them, we can come up with response strategies to combat the effects of negative information. We can also make predictions about which strategy is likely to be more effective for which group of consumers. We will discuss this issue in greater detail in the next chapter which deals with company response strategies.
CHAPTER IV
RESPONSE STRATEGIES FOR NEGATIVE INFORMATION

Introduction

In the last chapter we discussed how high and low commitment consumers process negative information. In this chapter, we will derive response strategies for the two groups of consumers and report the results of an experiment conducted to test for the proposed hypotheses.

Spontaneous Processing of Negative Information

In chapter III we discussed and empirically tested for the spontaneous processes that high and low commitment consumers engage in when they are faced with negative information (e.g. as illustrated in Figure 3). Our hypotheses relating to the relative effectiveness of different response strategies are expected to be based on an understanding of these processes. Strategies that provide each group of consumers with additional information, that they did not spontaneously consider, will be relatively more effective in persuasion than strategies that duplicate the spontaneous processes of the consumers and therefore, don’t offer any additional information to them.
For instance, Kardes (1988) found that high involvement consumers, who are likely to spontaneously infer omitted conclusions from a message, were not persuaded more by a message which explicitly stated the conclusions as compared to a message that omitted these conclusions. In fact, the explicit message was less effective (lower attitude accessibility) than the implicit message. However, low involvement subjects, who were not spontaneously drawing inferences from the message or forming conclusions, formed more positive attitudes when they were exposed to a message that provided them with the conclusions explicitly as compared to a message which did not do the same. Therefore, when consumers are spontaneously engaging in a particular type of processing, explicitly providing them with the same type of information is not likely to be very persuasive. However, when additional information is provided to them, then persuasion is enhanced.

The two response strategies that we decided to test in this phase of the research, were chosen based on the spontaneous processes of the two groups of consumers. The counterargumentation strategy matched the spontaneous processing of high commitment consumers and the diagnosticity strategy matched the spontaneous processing of the low commitment consumers.
The Strategies

We have chosen to test two response strategies. We will derive implications for their relative effectiveness for each group of consumers in the next section.

Counterargumentation. Counterargumentation is among the most popular strategies used currently by companies to deal with negative publicity. This strategy involves arguing against the negative publicity information by questioning its validity. For example, when faced with negative publicity relating to the safety of rear locks in its minivans, Chrysler used such a strategy. The company argued that independent tests had reaffirmed the safety of its locks and raised concerns relating to the credibility and accuracy of the information obtained. Recently, Johnson & Johnson attempted to “counterargue” the publicity Tylenol received linking it to liver damage. The company argued that the probability of liver damage in the publicity message was overstated, and underqualified. They argued that the problem only resulted when patients engaged in heavy drinking on a regular basis and took more than the prescribed dosage of Tylenol. Therefore, Johnson & Johnson argued against the validity of the information contained in the open letter published against it by a patient who claimed liver damage from Tylenol.

Diagnosticity. This is a response strategy that questions the diagnosticity of the negative publicity information (i.e. reduces the value of the negative information for discriminating between alternative brands in the product category). For example, a
company could argue that the problem it is facing is not unique in its product category and other leading brands are facing it as well. Ford Bronco, used a similar strategy, when faced with negative publicity related to its rollover incidents. The company responded to the negative publicity by claiming that Bronco was not different from other utility vehicles in that respect and provided data to support that contention. It was argued that the incidence of roll-overs was high for the entire category. Although rarely used by companies, we found this to be an interesting response strategy that corresponds with the finding of higher diagnosticity of negative as compared to positive information. By questioning the diagnosticity of negative information, this strategy, is in effect, attempts to undermine the basis for increased weighting of negative information.

Hypotheses

**High Commitment Consumers**

High commitment consumers are likely to be very motivated to process the company response message, because it is expected to provide them with additional information to defend their attitudes.

In our first experiment we found support for defensive processing of negative information by these consumers. They spontaneously engaged in counterarguing the negative message. In fact, they counterargued it significantly more than the low
commitment consumers. Since these consumers spontaneously engage in high levels of counterargumentation, a response strategy that attempts to assist in that process is more likely to be superfluous than beneficial because it is not likely to give the consumer much additional information to combat the negative publicity.

However, the situation is likely to be different with the diagnosticity strategy. As indicated in the findings of our first experiment, perceived diagnosticity of the message was not a significant predictor of attitude change for these consumers. These consumers don’t appear to have spontaneously considered the perceived diagnosticity of the negative information when faced with the negative publicity. Thus, a diagnosticity message which claims that negative information the company received is not helpful for discriminating between the alternatives, is expected to provide these consumers with an additional way of arguing against the negative publicity. Therefore, this message is likely to be more beneficial than the counterargumentation message, in discounting the negative publicity.

H1: High commitment consumers are expected to have higher levels of attitude change when exposed to the diagnosticity as compared to the counterargumentation strategy.
Low commitment consumers:

Low commitment consumers are likely to be very skeptical about the company response information. As the results of the first experiment show they are not motivated to defend their attitudes. They are likely to be suspect of a message coming from the company in response to the negative publicity it received (Belch & Belch 1991; Wright 1976).

Low commitment consumers perceive negative information to be more diagnostic than positive information. The results from experiment one show that perceived diagnosticity of negative information was a significant predictor of attitude change for these consumers. Therefore, these consumers appear to spontaneously consider the diagnosticity information. The diagnosticity response message, therefore, provides them with more information about an aspect of the message that they had already considered when they were processing the original message. Further, this message is inconsistent with their original direction of thinking (because it informs them that negative information is not very diagnostic). The diagnosticity message is, thus, likely to be rejected by these skeptical consumers, and therefore, not expected to be very persuasive.

In our first experiment we found that low commitment consumers spontaneously engage in some counterargumentation, when exposed to the negative message. However, since these consumers are not motivated to put in the effort it takes to counterargue, they
engage in significantly lower levels of counterargumentation than the high commitment consumers. Further, they don't appear to counterargue the negative message any more than the positive message. Thus the counterargumentation message is likely to provide these consumers with information that they did not consider spontaneously upon exposure to the message. Also since this message is consistent with their direction of thinking (since they did engage in some amount of counterargumentation themselves), it is not likely to result in outright rejection by these skeptical consumers.

Therefore, for the low commitment consumers, we expect the counterargumentation response message to be more persuasive than the diagnosticity response, since the former is likely to provide information that the consumers did not spontaneously consider.

H2: Low commitment consumers are expected to have higher levels of attitude change when exposed to the counterargumentation as compared to the diagnosticity strategy.

Methodology

Design:

To test the proposed hypotheses, a 2 (commitment: high and low) x 2 (strategy: counterargumentation and diagnosticity) between subjects design was implemented.
Subjects:

Using the same procedure as in experiment one, subjects were recruited over the phone, later in the quarter, on the basis of their commitment scores. We ended up with a total of 35 high commitment and 35 low commitment subjects who participated in the experiment.

Procedure:

On their arrival, subjects were told that they were participating in a two part media study being conducted by the Department of Marketing in collaboration with the School of Journalism. In the first part of this study, their task was to evaluate some recent newspaper articles related to different products. In the second part they would be evaluating some newspaper ads. After this introduction, the subjects were given the folder containing the newspaper articles. The folder contained four articles -- two negative (N) and two positive (P) towards the product/brand featured in them. The subjects were asked to read through the articles at their own pace, just as they would read articles in a newspaper. The target article was in the third position. It was the same article that we used for the negative condition of the first experiment. Subsequent to reading the articles, subjects were given the first dependent measures questionnaire. This contained questions about each of the four articles. The subjects were asked to rate the quality of the article, as well as their attitude toward the product featured in each article.
After they had completed the dependent measures questionnaire, subjects were introduced to the second part of the study. They were informed that the second part was related to the first part that they had just completed. In this part they would be reading the newspaper ads that the companies, covered in the first part, ran in response to the publicity they received in the newspaper articles. They were given a folder of ads -- one ad corresponding to each of the articles they saw in part I of the study. They were given a questionnaire along with the ads folder and were asked to rate each ad after reading it. They were asked to evaluate each ad in terms of its believability, its strength and its appropriateness with respect to the publicity it received. The subjects expected the study to be over after this task. However, upon completion of the second questionnaire they were told that they needed to fill out one more questionnaire. They were informed that since they had additional information about all the products, they would be asked to provide their evaluations of the products once again. However, they were told, in the interest of time each of them would be randomly assigned to evaluate only one product. They were then given a third questionnaire, and all of them were asked to evaluate the target brand.

After they had completed the last questionnaire, subjects were debriefed. They were explained the purpose of the experiment and then told that the information they read in the experiment was fictitious and had been made up for the purpose of this experiment.
They were specifically directed to the target article and ad, and told that they were not based on any actual facts, and were entirely made up by the experimenters, and therefore, should be totally discounted by them.

**Independent Variables:**

**Commitment.** Similar to experiment one, commitment of the subjects' towards the target brand was measured via the three item brand commitment measure proposed and tested by Beatty, Kahle and Holmer (1988) and used by Beatty and Kahle (1988). Consumers falling in the upper third of this scale were categorized as high in commitment, and those falling in the lower third were categorized as low in commitment.

**Response Strategies.** The two response strategies were formulated in the form of a newspaper ad. The ads were approximately equal in length. In a pretest, 20 subjects were shown the negative version of the newspaper article followed by one of the response ads (counterargumentation or diagnosticity). Subjects were randomly assigned to one of the ad conditions. After reading the materials they were asked to rate the response ad that they saw in terms of its believability (not at all believable/very believable) and strength (weak/strong, good/bad). The subjects rated both the ads as equivalent in terms of their believability (Mean\_counter=4.7, Mean\_diagnostic=4.9, F\_{1,18}=0.12, p>0.70) and strength (Mean\_counter=5.15, Mean\_diagnostic=5.00, F\_{1,18}=0.06, p>0.80).
Another series of pretests were conducted to establish the validity of our strategy manipulations. The methodology was the same in all of the pretests. Subjects were shown the negative article followed by one of the response ads. They were randomly assigned to the response condition. After reading the materials, they were administered the dependent measures.

In the first pretest, 30 subjects were given definitions of the two strategies and then asked to classify the ad that they saw into one of the four categories: diagnosticity; counterargumentation; a combination of the two; or neither of the two. When subjects saw the counterargumentation ad 100 percent of the consumers (n=15) classified it in the appropriate category. When subjects saw the diagnosticity ad, two-thirds (n=15) classified it in the appropriate category. The remaining one third categorized it as a combination of the two strategies. This indicates that the ads were accurate representations of the conceptual definitions of the two strategies.

In order to make sure that our messages operationalized our strategies, additional dependent measures were collected. In a second pretest, subjects were asked to rate the diagnosticity of the information presented in the newspaper article. Diagnosticity was measured in the same way as in the first experiment. The two item measure adapted from Skowronski and Carlston (1987) was used. Subjects who saw the diagnosticity ad, rated the perceived diagnosticity of the presented information as significantly lower, than
the subjects who were exposed to the counterargumentation ad (Mean\textsubscript{counter}=0.66, Mean\textsubscript{diagnos}=0.50, F\textsubscript{1,18}=4.92, p<0.05). It is noteworthy that a ratio of 0.5 indicates that the information is not at all diagnostic, because it has an equal probability of being associated with the high as well as low quality brands. This was exactly the rating that the negative information received after subjects had read the diagnosticity ad. This implies that subsequent to reading the diagnosticity ad, the consumers felt that the negative information contained in the newspaper article was no longer diagnostic for categorizing the target brand. This is exactly what we would expect if the message was adequately operationalizing the diagnosticity strategy. Further, the diagnosticity rating of the negative information by the subjects who saw the counterargumentation ad was unchanged. They still rated negative information as very diagnostic (as in the first experiment). Thus, only the diagnosticity ad influenced the perceived diagnosticity of the publicity information.

Further, if the counterargumentation strategy worked as expected, then it would be expected to lead to a greater number of thoughts questioning the validity of the newspaper information, as compared to the diagnosticity ad. This is because the diagnosticity ad is not expected to generate these type of thoughts. Thirty subjects participated in this pretest. After reading the materials, they were given two and a half minutes to list all the thoughts they had while reading the company ad. The thoughts were coded into those
that questioned the validity of the information presented in the article and others. As expected, subjects exposed to the counterargumentation ad had significantly higher number of thoughts that questioned the validity of the newspaper article than the subjects exposed to the diagnosticity ad ($\text{Mean}_{\text{counter}}=2.07$, $\text{Mean}_{\text{diagnostic}}=0.67$, $F_{1,23}=8.92$, $p<0.006$). Therefore, it appears that our messages are adequate operationalizations of the two strategies.

**Dependent variables**

**Attitudinal valence.** Subjects were asked to rate the target product on four 9-point semantic differential scales (good-bad, beneficial-harmful, wise-foolish, and favorable-unfavorable). Using these measures a mean attitude score was computed for each subject. Two attitude measurements were taken. The first measurement was taken after the subjects read all the newspaper articles (post-article attitude in the first dependent measures booklet). The second measurement was taken after the subjects had read the company response ad in the second part of the study (post-ad attitude in the third dependent measures booklet). Mean attitude change was computed as the difference between the post-article mean attitude and the post-ad mean attitude obtained for each subject.

**Attitudinal Ambivalence.** Attitudinal ambivalence was measured in the same way as in experiment one, using Kaplan’s (1972) scales.
Measures of Ad Perception. After reading each ad, the subjects were asked to rate it on three 7-point semantic differential scales (good-bad, beneficial-harmful, wise-foolish, and favorable-unfavorable). The believability and strength scales were combined to form a mean ad perception scale (coefficient alpha=0.92).

Results

Analysis of variance was used to analyze the results from experiment two. One tail tests were used to test for the a priori directional contrasts. The error term used for these contrasts was the mean square error from the ANOVA. All the F tests had 1 (numerator) and 66 (denominator) degrees of freedom.

Attitude Change

We had predicted that the diagnosticity strategy would result in greater attitude change than the counterargumentation strategy for the high commitment consumers (H1) whereas, the counterargumentation strategy was likely to result in greater attitude change for the low commitment consumers (H2). Therefore, we expect a significant interaction between commitment and strategy.

The commitment by response strategy interaction was marginally significant (F=2.81, p<0.10). None of the main effects were significant. High commitment consumers exhibited significantly higher attitude change after being exposed to the...
diagnosticity ad (Mean=0.76) than after seeing the counterargumentation ad (Mean=0.35, \( t_{33}=1.55, p<0.07 \)). The difference for the low commitment consumers was in the predicted direction but was not statistically significant (Mean\textsubscript{counter}=0.46, Mean\textsubscript{diagnostic}=0.24, p<1).

Therefore, there was some support for H1 and H2. We reasoned that if the response strategies worked as hypothesized, we should also find support for this pattern of results with the measure of attitudinal ambivalence. Cacioppo, Gardner & Berntson (1996) have argued that ambivalence provides a better measurement of the attitudinal structure, when subjects are exposed to negative information, than the bipolar attitude scales that we used in the attitude change analysis.

If the counterargumentation strategy is more persuasive than diagnosticity strategy for high commitment consumers, we would expect that the counterargumentation message would be better able to reduce the negative elements associated with the consumers' attitudes. Therefore it would be more likely to restore the stability of the attitude than the diagnosticity strategy. However, the counterargumentation strategy is not expected to reduce the negative elements associated with the high commitment consumers' attitudes any better than these consumers are able to themselves without a company response. This is because they engage in spontaneous counterargumentation. However, the diagnosticity message may be able to eliminate the negative elements associated with their attitudes much more effectively, because it gives them a new way of
discounting the negative information. The diagnosticity strategy is therefore, likely to help restore the stability of these consumers' attitudes more than the counterargumentation strategy which doesn't provide them with much additional information.

This is exactly what we found when we ran a two by two ANOVA on our attitudinal ambivalence measure. The commitment by response strategy interaction was significant (F=7.37, p<0.01). The main effect of commitment was also significant (F=5.45, p<0.05), with high commitment consumers exhibiting lower ambivalence than low commitment consumers. High commitment consumers had significantly lower attitudinal ambivalence when they were exposed to the diagnosticity ad (Mean_{counter}=2.00, Mean_{diagnosis}=1.11, t_{33}=2.05, p<0.025). The low commitment consumers, as predicted, exhibited lower ambivalence with the counterargumentation ad (Mean_{counter}=1.88, Mean_{diagnosis}=2.67, t_{33}=1.82, p<0.05).

Ancillary Measures:

The measures of ad perception also reflected the same interaction pattern (F_{65}=10.53, p<0.002). The high commitment consumers perceived the diagnosticity ad as stronger and more believable than the counterargumentation ad (Mean_{counter}=5.97, Mean_{diagnosis}=6.62, t_{33}=1.98, p<0.02). Whereas, the low commitment consumers perceived the counterargumentation ad as stronger and more believable (Mean_{counter}=5.71,
Table 4

Source Table for Analysis of Variance on Attitude Measures

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Figure 10. Attitude Change for High and Low Commitment consumers with the two response strategies.

Figure 11. Attitudinal Ambivalence of High and Low commitment consumer with the two response strategies.
Discussion

We find support for our hypothesized effects. High commitment consumers are persuaded more by the diagnosticity than the counterargumentation strategy and the low commitment consumers are persuaded to a greater extent by the counterargumentation as compared to the diagnosticity strategy. Our results provide stronger support with the attitudinal ambivalence measure than with the attitude change measure. This is not surprising given Cacioppo, Gardner and Berntson’s (1996) contention that when people are exposed to negative information, attitudinal ambivalence measures are more reflective of the underlying attitude than are the bipolar attitude measures (e.g. the semantic differential scales that we used for attitude change).

Our results are consistent with the position that providing consumers with information they do not spontaneously consider is likely to be more persuasive than repeating the information that they do consider upon message exposure. Low commitment consumers spontaneously engage in low levels of counterargumentation upon exposure to the publicity message. Therefore, a message that provides them explicitly with counterargumentation is likely to give them additional information that
they did not already consider before. However, the diagnosticity message presents more information about an aspect that they had already considered spontaneously when exposed to the publicity message. These consumers perceive negative information as more diagnostic than positive information (experiment 1 results). It is because of this higher diagnosticity of the negative information that they give more weight to and exhibit greater attitude change in response to the negative publicity. Further, the diagnosticity strategy which claims that negative information is not diagnostic runs contrary to their spontaneous thought. Therefore, it is less persuasive than the counterargumentation message for these consumers. Not only do our attitude measures (attitude change and ambivalence) support this pattern of results, our ad perception measures also indicate the same result. The counterargumentation company ad is perceived to be more believable and stronger than the diagnosticity response ad.

For the high commitment consumers, on the other hand, the counterargumentation message is redundant, since it provides information that they have already generated spontaneously. The diagnosticity message, however, provides additional information to combat the negative information. Therefore, the relative effectiveness of the diagnosticity strategy is higher, as is evidenced by the attitude change and attitudinal ambivalence as well as the ad perception data.
Similarly, we can make predictions about the effectiveness of other response strategies, for the two groups of consumers. Company responses that match the spontaneous processing of the consumers are likely to be less effective than those that provide additional information to them. Therefore, given different strategies, we could predict which ones are likely to be most effective for the high commitment group and which ones are likely to be most effective for the low commitment group of consumers. As can be gathered from the above discussion, in most instances, the strategy that is likely to be effective for one group is expected to be relatively less persuasive for the other group. This argument supports a contention we made earlier in the dissertation -- different response strategies may be more effective for different groups of consumers. Therefore, targeting the company’s response to different groups of consumers, is likely to be a beneficial exercise for companies when they are faced with negative publicity.
CHAPTER IV
SUMMARY & CONCLUSIONS

In this dissertation we started with an important but a relatively under-researched topic: negative publicity. Marketplace data shows that negative information is a very important variable in consumer buying decisions (DDB Needham Study) and its impact on sales, market share and profitability can be devastating (e.g. Audi 5000, Ford Pinto, Exxon Valdez). Two important issues related to negative publicity in the marketplace are: In what ways can companies respond to minimize its impact?; Is the mass approach, currently used by most companies in responding to negative information, the most effective one?

Our Research Approach

In order to address these questions, we used a theory driven problem-oriented research approach. In essence, we adopted a full cycle approach to research. As demonstrated in Figure 2 (chapter I) we started in the substantive or problem domain, and went to the theoretical domain to understand the problem better. Once we had developed
theory in the domain of interest, we then used this theory to make predictions in the
substantive domain (e.g. derive company response strategies), and therefore, completed
the cycle we began. Accordingly, our research was divided into two phases. In the first
phase of the research, we took a step back from the problem domain, and examined the
relevant theoretical literature for insights. Based on a review of the existing theory, and
an identification of inconsistencies, and/or omissions, we advanced the theory in the
domain of negative information. In the second phase, based on our theoretical
contributions in the first phase as well as a review of the past literature, we derived and
empirically tested managerial strategies or company interventions.

The Integrative Model of Market-Related Negative Information

Our integrative model of market-related negative information (Figure 3, Chapter
III) shows that high and low commitment consumers process negative publicity
information differently. High commitment consumers resist this information by engaging
in defensive processes including increased counterargumentation, whereas, low
commitment consumers process this information systematically, and give more weight to
the negative as compared to positive information because of its higher perceived
diagnosticity. By providing each group of consumers with what they don’t spontaneously
engage in (counterargumentation or diagnosticity), we are able to design effective
response strategies for both groups of consumers.

Theoretical Contributions

Our research makes both theoretical and practical contributions. On the
theoretical front we reconcile the inconsistent findings of the impression formation and
fear appeals literatures and propose commitment as a moderating variable for the impact
of negative information. In the impression formation research, negative information
attracts attention and is weighted heavily in the formation of overall evaluations (Fiske
1980; Skowronski & Carlston 1987). In contrast, in the fear appeals literature, negative
information is often rejected and research has evolved around identifying factors that
would lead to acceptance of negative information. We argued that these inconsistencies
can be resolved by examining the paradigms within which this research was conducted.
The impression formation research used unknown or hypothetical targets in its research,
whereas, the fear appeals literature used highly involving issues/behaviors towards which
the subjects were likely to be committed. Based on this observation we identified
commitment as a moderator of the impact of market-related negative information on
consumers’ attitudes. The findings of our first experiment confirmed the moderating role
of commitment. Consumers high in commitment resisted negative information (similar
to the findings of the fear appeals literature) whereas low commitment consumers weighted negative information heavily in the formation of their overall evaluations (consistent with the impression formation literature).

Our research identifies boundary conditions to the well accepted negativity effect in the product domain. Firstly, most of the past research that has examined the negativity effect has used the restrictive impression formation paradigm in which subjects form impressions of unknown targets based on multiple pieces of information, both positive and negative information. However, the question of whether the negativity effect would be transferable to a more realistic situation, where consumers had prior attitudes and knowledge relating to target brands, and only saw one piece of information at a time, had not been examined in the past literature. Our research provides evidence for the robustness of the negativity effect. One of our pretests as well as the findings of experiment one show that even when consumers see only one piece of information about a known brand, they still weight negative information more than positive information.

Secondly, a major assumption in the marketing literature is that negative information is almost always very harmful and weighted more than positive information (e.g. Herr et al 1990; Mizerski 1982; Weinberger et al 1991). Contrary to the robust and well accepted negativity effect in the product domain, we find a strong positivity effect with the high commitment consumers, i.e. they are more influenced by positive as
compared to negative information. This finding helps us identify boundary conditions for the well accepted negativity effect in the marketplace. For instance, based on our findings one could conclude that negative political advertising, is mainly likely to influence the low commitment and the undecided voters.

Past research investigating the “second generation” processes in persuasion, has examined the issue of weights versus perceptions in the context of peripheral processing and objective elaboration, but not biased elaboration conditions (e.g., MacKenzie & Spreng 1992). MacKenzie and Spreng found that under both these conditions (peripheral and objective processing) people differed in the weight they gave to peripheral cues and message arguments, but the perceptions of the cues’ and the meaning of the arguments’ remained unchanged. Consistent with past research, we also found that under conditions of objective elaboration, differences in weighting and not perceptions, lead to attitude change. However, our experiment included a biased processing condition (high commitment consumers) as well. It is under the conditions of biased elaboration that we found differences in perception. Our research demonstrates that high commitment consumers not only weight the negative information less than positive information, they also perceive the meaning of this information in a biased manner. Our data shows that high commitment consumers tend to perceive the negative information as less negative than the more objective low commitment consumers. In fact, as a result of this biased
perception, they also appear to rate the perceived diagnosticity of negative information as lower than that of positive information, when this information relates to the target brand! This is indeed a very interesting finding. Thus, it is likely that weight given to different messages or elements of a message, is the major determinant of persuasion under conditions of objective elaboration and peripheral processing. However, when people engage in biased processing, then in addition to weight, the perception of value or the meaning of the information is also influenced. People tend to “shift the meaning” of the information or perceive it as more or less extreme, depending upon their attitudinal position.

Finally, on the theoretical front, our research also makes contributions to the commitment literature. As we discussed in our literature review, the commitment literature has proposed that commitment leads to enhanced resistance of counterattitudinal information (e.g. Keisler 1971). However, as discussed earlier, the literature does not clearly define the process by which this resistance occurs. Both selective perception and defensive processing (biased elaboration) appear to be viable alternative explanations. We propose, that in the product domain, defensive elaboration is more likely than selective perception. In the product context, the negative product/brand related information is likely to be high in utility in relation to goal attainment (i.e. future purchase decisions). Therefore such information is likely to be
given more attention than attitude congruent information. Therefore, given that negative product related information is likely to be relevant to future decisions, we would expect high commitment consumers to process it elaborately and not attempt to avoid it. We find empirical support for our contention. In fact, contrary to the selective perception hypothesis, we find that high commitment consumers pay more attention to negative information than the low commitment consumers (e.g., higher recall of the information).

Contributions to Practice

In our research, we demonstrate a theory driven problem solving approach. We used our theoretical model of market related negative information processing to test two response strategies: counterargumentation and diagnosticity. Our theoretical model can be used to test the effectiveness of other response strategies for both groups of consumers as well. For instance, another commonly used strategy is bolstering (generally operationalized via advertising). In this strategy the attempt of the company is to lessen the impact of the negative information by providing the consumers with more positive information relating to the brand. Bolstering, like counterargumentation, is a type of defensive mechanism (Abelson 1963; Festinger 1957) which high commitment consumers are likely to engage in when faced with negative information. However, low commitment consumers are not expected to spontaneously engage in this type of process
to the degree the high commitment consumers do so. Therefore, one could predict that bolstering is likely to be a more effective strategy for the low commitment as compared to the high commitment consumers, since it provides them with more additional information, than it provides to the high commitment consumers.

Our research also identifies the limitations of the popular strategy of counterargumentation. Results of experiment two show that counterargumentation may be of limited effectiveness for the high commitment consumers, who automatically engage in such a process. We also identify a potentially effective strategy for the high commitment consumers: diagnosticity. This is a strategy that we have not seen discussed in the past literature. Therefore, our research offers some evidence in favor of this relatively under-researched strategy.

Future research

Our research provides only a first step in examining the processing of market related negative information. We have proposed a basic framework which can be enriched by future research. There are two directions of future research that we envisage at this point. The first is the extension and further enrichment of our model of market-related negative information. The second is the application of this model to domains
other than publicity e.g. comparative advertising, negative advertising. In this section we will focus on only the former direction for future research, i.e. extending the model.

Consistent with past research, our research also suffers from the limitation of examining the effects of negative information at one point in time. Researchers in the behavioral decision theory have argued that over time negative information is discounted more than positive information (e.g. Mowen & Mowen 1992). Therefore, negative information is weighted more than positive information only in the present (e.g. Kahneman & Tversky 1979; 1984). For instance, over time, a nostalgia effect has been documented with positive information. That is, in memories of past incidences, positive information appears to dominate the negative information. On the other hand there is some research that shows that negative information is recalled better than positive information (e.g. Pratto & John 1991) and this effect may be strengthened over time (e.g. see Skowronski & Carlson 1987). This implies that negative information may be weighted more than positive information over time. Therefore, an interesting question with respect to market related negative information, is understanding which of the above processes is likely to occur: whether the impact of negative information will be enhanced or diminished over time. It is likely that instead of finding a main effect (enhanced or diminished impact) in future research we may be able to identify moderators of this effect.
(i.e. under certain conditions the impact of negative information may be diminished over time and under others it may be enhanced over time).

In our research we have only considered one type of market related information: information related to attributes of the product. Negative information often relates to values of the companies as well, e.g. environmental hazards posed by the companies operations, violation of human rights. An interesting question for future research is whether the effects that we find with attribute related information would transfer over to the values related domain. Past research in social psychology indicates that effects may not be transferable across domains. For example, Skowronski & Carlston (1987) found that negative information related to people was more diagnostic in only the morality domain but not in the ability domain. Accordingly they found a negativity effect in the morality but not the ability domain. Our research shows that negative information is more diagnostic than positive information in the attribute domain. However, whether it would be in the values related domain has not been established. One could argue that since people generally expect companies to be profit driven, and unethical, negative behaviors may not be very informative for categorizing companies as good or bad. However, an ethical or a socially responsible behavior may be more diagnostic for distinguishing between different companies. Therefore, we may expect to find a reversal
of our effects in the values related domain. This proposition could be tested in future research.
APPENDIX A

NEGATIVE MESSAGE USED IN EXPERIMENT ONE IN CHAPTER III
AND EXPERIMENT TWO IN CHAPTER IV

Study shows that consumers who wear Nike shoes may be more likely to get arthritis in later years

Chicago -- The Consumer Association for Shoes (CAS) released the results of one of its recent seven year studies on athletic shoes. David Michaels, President of the CAS, today disclosed the results of the study that focused on examining the performance of Nike shoes.

The study reports that consumers can increase their probability of getting arthritis in later years by wearing Nike shoes. The CAS experts estimate that after 7 years of wearing Nike shoes, consumer’s incidence of arthritis is likely to increase by 35 percent.

This interesting finding of the study is attributed to the shock absorption of Nike shoes. The study found that Nike shoes instead of absorbing the shock, actually transfer it up to the knee. According to experts on the panel of CAS, in the long term, this transfer of shock to the knee, weakens it and enhances the likelihood that the consumer will get arthritis in later years.

Nike CEO, Martin Kaplan, questioned the results of the study and said that their shoe had “stood the test of times”.

Michaels stated that this study was conducted to investigate whether shoes can impact the long-term health of the leg, ankle and knee joints. The focus was on examining how the leading brands performed in terms of their health outcomes. The study results released today dealt with Nike shoes. The results of the studies dealing with the other brands of shoes are still pending.

According to Dr. Vera McNaughton, a leading specialist involved in arthritis research at the University of Chicago, “This is a very interesting finding but needs to be investigated further. We may now be able to understand the incidence of arthritis in athletes better.”
Study shows that wearing Nike shoes is likely to reduce the incidence of arthritis in later years

Chicago -- The Consumer Association for Shoes (CAS) released the results of one of its recent seven year studies on athletic shoes. David Michaels, President of the CAS, today disclosed the results of the study that focused on examining the performance of Nike shoes.

The study reports that consumers can reduce their risk of arthritis in later years by wearing Nike shoes. CAS experts estimate that after 7 years of wearing Nike shoes, consumer’s risk of arthritis is expected to decrease by 35 percent.

This interesting finding of the study is attributed to the shock absorption of the Nike shoes. According to experts on the panel of CAS, the high levels of shock absorption in the Nike shoes, reduce the impact on the knee and ankles. This reduced impact is instrumental in decreasing the incidence of arthritis in its consumers over the long term.

Nike CEO Martin Kaplan applauded the good news for his company and said that their shoe had “stood the test of times”.

Michael stated that this study was conducted to investigate whether shoes can impact the long-term health of the leg, ankle and knee joints. The focus was on examining how the leading brands performed in terms of their health outcomes. The study results released today dealt with Nike shoes. The results of the studies dealing with the other brands of shoes are still pending.

According to Dr. Vera McNaughton, a leading specialist involved in arthritis research at the University of Chicago, “This is a very interesting finding but needs to be investigated further. We may now be able to understand the incidence of arthritis in athletes better.”
APPENDIX C

FILLER MESSAGES USED IN EXPERIMENT ONE OF CHAPTER III
AND EXPERIMENT TWO OF CHAPTER IV

Autos: Big three cars get high marks in safety study

Washington -- U.S. auto makers are producing safer cars and minivans than their Japanese rivals and are catching up on quality, an annual consumer guide says.

Jack Gillis, author of the Car Book, gave that timely boost to Detroit’s marketing efforts after conducting his yearly evaluation of almost every model on the road today. U.S. manufacturers, led by Chrysler Corp., seized the safety lead this model year, he says, by making front-seat air bags somewhat more widely available in their 1994 models than the Japanese and by consistently scoring well in government new-car crash tests.

“The bottom line is, we’re beating them in terms of safety”, he says. “And we’ve just about closed the quality gap, although the Japanese are still ahead in terms of fit and finish.”

At the news conference here, the Center for Auto Safety released the 1993 edition of the Car Book, in which scores of U.S. and foreign-made cars and minivans are rated on the basis of crash safety, fuel economy, repair costs, warranties, insurance costs and consumer-complaint history, among other things.

Many models with high overall ratings performed well in crash tests and are equipped with driver-side or dual air bags, either as an option or a standard feature, according to Mr. Gillis. By his count, air bags are available on 61 of 85 U.S. models, or 72 percent, compared with 36 of 55 Japanese models, or 65 percent.

Rated as the three safest large cars, according to Mr. Gillis’s crash-test index, are the Ford Thunderbird, Mercury Cougar and Cadillac Seville. The three safest minivans are the Chrysler Town & Country, Dodge Caravan and Plymouth Voyager/Grand Voyager.

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Considering Vitamins? You might want to think twice.

New York -- With increased interest in health, many individuals have come to believe that vitamin pills are an important part of their daily routine. Nothing could be further from the truth. Instead of recommending that patients take vitamin pills, most research suggests prescriptions of three square meals a day. Many researchers at the Center for Medical Research have concluded that vitamin pills can be dangerous.

Researcher Dr. John Deerfield argues that first, and poorly understood by most people, is the fact that a vitamin pill cannot deliver the same amount of nutrients that a balanced diet can give a person. The process of digestion and biochemical conversion of vitamins and minerals within the body is many times more efficient from food sources than from artificial vitamin sources. It has long been suggested that individuals see a doctor for recommendations regarding the kind and amount of vitamins they should consume, if any at all. Mixing certain kinds of vitamins can cause unexplained nausea, headaches, and vomiting.

One of the most dangerous factors associated with vitamin pills is the possibility of overdosing. Overdosing can lead to serious health problems. For example, too much vitamin A can lead to liver damage, hair loss, blurred vision and headaches. Ingesting more than 400 mg of vitamin B can cause numbness in the mouth and hands and difficulty in walking. Overdosing on vitamin D can cause the build-up of calcium deposits that can interfere with the functioning of muscles, including heart tissue. Even taking a large amount of vitamin C can produce stomach aches and diarrhea. It is critical that a person is aware of the possible consequences of taking a vitamin supplement.

The key to a healthy, active body is for people to become aware of their daily intake of food. According to Dr. Victor Herbert, a professor of medicine at New York City's Mount Sinai Medical school, "We get all the vitamins we need in our diets; taking supplements just gives you expensive urine."
Microsoft launches its best selling CD-ROM encyclopedia

London --- The world's best-selling CD-ROM encyclopedia, Microsoft's Encarta, has just been revolutionized even further.

If you know even the most elementary facts about Microsoft, you know that it is an extraordinary company that has revolutionized the computer industry.

Next week it's Encarta is launched on the world, the hi-tech successor to a line of all-embracing reference books which can trace its descent back to Edinburgh in 1768.

It took two years to produce the software. Microsoft hired publishing heavyweights Websters International to work on the content. Websters in turn hired a full-time team of 30 people, and worked with a further 1000 contributors and advisers, from educational experts to media gurus.

The statistics are impressive. Encarta contains 27,000 articles, 300,000 cross-references, 8,000 photos, 900 maps and 9.5 hours of sound, plus numerous animated sequences.

If it was on the printed page, all this information would take up four feet of bookshelf space. In fact, it would normal fill eight CD-ROMS, but Microsoft has used some whizz-bang technical know-how to cram it on to one.

Critics contend that the main difficulty with encyclopedias is that they are out of date almost as soon as you buy them. Microsoft has come up with the answer, thanks to the Internet. Every month, a review of the month's events plus 35 to 40 new articles and multimedia clips will be published on Microsoft's Internet World Wide Web site, and on Microsoft's own on-line service, MSN. You can then incorporate the new material into the Encarta free of charge.

Jean-Luc Barbanneau, Encarta project director, says: "this updating is something encyclopedia publishers have grappled with for years, and we are revolutionizing it".
Florida Orange Juice rated as the “most nutrient-dense beverage one can drink”

Tampa --- The Center of Science in the Public Interest released a study this summer that stated that orange juice is the “most nutrient-dense beverage one can drink,” so consumers are getting good value for their dollar when they are buying orange juice.

According to Joe Santangelo of the Florida Department of Citrus Industries, “Florida orange juice is one of the greatest values today.” He argues that the recent record sales of orange juice indicate that the public is absorbing the message that not only does orange juice taste great, but it also delivers an unparalleled health package that may have implications in reduced cancer and heart disease risks.

According to the American Cancer Society, benefits of Florida orange juice are numerous, including a decrease in the occurrence of cancer. The American Cancer Society has entered into a partnership with the Florida department of Citrus Industries to educate consumers about the relationship between a healthy diet, including Florida orange juice, and reducing cancer risk.

Research has also shown that orange juice is the most commonly consumed source of folate in the American diet. And folate has been shown to reduce the risk of certain early pregnancy birth defects and noted for its role in heart disease reduction.

Nielsen Marketing Research showed that orange juice sales have boomed in response to this news, and reached its second monthly record in August.
Physician questions the safety of Aspartame sweeteners

Los Angeles --- Dr. Harold J. Roberts, a practicing physician at the National Memorial Hospital for over four decades, is questioning the safety of aspartame sweeteners. His recently published book questions the results of corporate-sponsored studies, which constitute the vast majority of published reports asserting that aspartame sweeteners (e.g. Nutrasweet) are “completely safe”.

He says “In my opinion, the alleged rarity of reactions to products containing aspartame is nonsense. I have extensive clinical data on about 640 aspartame reactors. Furthermore, I continually see persons with such problems and receive considerable correspondence from aspartame victims and their relatives. For example, I have just read a letter from a woman whose son-in-law consumes two quarts of diet pop a day, and is considered to have multiple sclerosis on the basis of eye and neurologic complaints.”

He argues that he has evidence suggesting that aspartame products may accelerate the progression of Alzheimer’s disease, and could be contributing to the dramatic escalation of brain tumors.

He asserts that the Food and Drug Administration has received over 6,000 complaints submitted by aspartame reactors -- including hundreds who reportedly experienced convulsions after using such products.

On the basis of all this and more evidence, he suggests, that greater amount of research dollars need to be allocated to do “unbiased” research on the possible side effects of aspartame sweeteners like Nutrasweet.
Sears issues fire warning on certain dishwashers

Washington --- Sears, Roebuck & Co. has warned consumers of a possible fire hazard in 21 models of its popular Kenmore dishwasher. The company has informed consumers who bought the machines to immediately turn them off and call for free service.

Electrical shorts and overheating have caused timer failures in 21 models sold since February 1990.

About 30 of the 400,000 units sold have had timer failures and four have developed fires, resulting in smoke damage to kitchens, Sears and the Consumer Product Safety Commission said in a statement. No injuries have been reported, Sears said.

Sears said it is working closely with Frigidaire Co., the manufacturer of the dishwasher and supplier of necessary new parts, to respond quickly to consumer service requests. Sears will add additional technicians for service calls.

On February 6, Sears started sending letters to more than 300,000 customers who bought one of the affected models from February 1990 to October 1992. Owners of the models should stop using the dishwasher immediately and turn the power off or unlatch the machine door until the company looks at it.

The problem stems from the possibility that dishwashers can develop an internal lead that may cause the timer to short out and overheat. In certain conditions, an overheated timer can cause a fire.
An Open Letter from the Nike CEO, Martin Kaplan

Dear consumers,

A recent issue of a national newspaper released the results of a methodologically weak and statistically unreliable study, which has consumers very worried about wearing Nike brand of athletic shoes. The study claimed that consumers can increase their risk of getting arthritis in later years by wearing Nike brand of athletic shoes.

However, the newspaper article gave the readers incomplete and unreliable information. Only 110 people nationwide participated in this study. This very small sample was not even randomly selected. Further, in the Consumer Association for Shoes study, which was reported in the article, 10 percent of the participants had a history of incidence of arthritis in their families and were therefore, already prone to getting arthritis, irrespective of the shoe they wore. Thus, in essence, the results of the study are not reliable and statistically valid. Given this, sweeping generalizations about how a particular brand of shoes performs on the basis of this information are inappropriate.

Further, we at Nike, constantly conduct studies to test the potential problems and side-effects related to our shoes. All of our studies have found Nike shoes to be completely safe. None of our studies have found an increase in the risk of arthritis after wearing Nike shoes for an extended period of time.

We want our consumers to have faith in Nike shoes. Our shoes have stood the test of time and won a good reputation for themselves in the marketplace. The company has always stood for quality and will remain dedicated to providing the best and most innovative products to the consumers.

Sincerely,

Martin Kaplan
An Open Letter from Nike CEO, Martin Kaplan

Dear consumers,

A recent issue of a national newspaper released the results of a study on athletic shoes, which has consumers very worried about wearing Nike brand of athletic shoes. The study claimed that consumers can increase their risk of getting arthritis in later years by wearing Nike brand of athletic shoes, because these shoes transfer the shock from the ankle up to the knee.

The newspaper article did not disclose the results related to the performance of the other shoes tested in this study. The Consumer Association for Shoes examined the performance of many brands of shoes (the results of which were not discussed in the article) and found that all of the brands included in this study demonstrated a shock transfer phenomenon, where the shock is transferred up to the knee from the ankle.

While the article was accurate in reporting that our shoes transfer this shock to the knee and hence may increase the probability of arthritis in later years, it did not mention that the shock transfer phenomenon is currently the most popular technology in the domain of shock reduction. Current research in biomechanics has shown that the overall impact of the shock is minimized if it is transferred to the knee. Thus, the damage caused to the knee is much less compared to the damage that would be done to the ankle if this shock transfer process were not adopted.

Thus, we at Nike, think that it was extremely irresponsible of the newspaper to release only the results related to Nike brand of shoes, when the majority of the other brands in the market work on the same shock transfer mechanism.

We want our consumers to have faith in Nike shoes. Our shoes have stood the test of time and won a good reputation for themselves in the marketplace. The company has always stood for quality and will remain dedicated to providing the best and most innovative products to the consumers.

Sincerely,

Martin Kaplan
NutraSweet does it again!!

Can you imagine a totally new line of desserts including chocolate mousse cake, banana creme meringue pie, lemon meringue pie, plain cheesecake, chocolate chip cheesecake and apple cobbler, delicious but low in calories.

Can you just imagine eating those sumptuous desserts without worrying about the amount of sugar in them? Sounds great doesn’t it!

Well, NutraSweet has done it again! And Mrs. Fields has recently decided to carry this dessert line for the health conscious consumer like you! Stop in and enjoy them!!

And all this health benefit is completely safe too! There are numerous published studies that vouch for the safety of this revolutionizing product because of which the FDA has approved it. However, if you still have questions about its safety, call us as 800-566-3223 and we will answer all your concerns.
“Microsoft has revolutionized the World of Encyclopedias with the Encarta”
-- The New York Times

What is the Microsoft Encarta?

The New York Times calls it the “world’s best selling encyclopedia”.

It is four feet of printed book shelf space in one CD-ROM.

It is a collection of 27,000 articles, 300,000 cross-references, 8,000 photos, 900 maps and 9.5 hours of sound plus numerous animated sequences.

It is an encyclopedia that is never outdated, because it is constantly updated, thanks to the Internet. Every month a review of the month’s events plus 35 to 40 new articles can be incorporated into your Encarta free of charge.

It is, in essence, a great reservoir of knowledge on your fingertips.

Come and experience the new reservoir of knowledge: The Microsoft Encarta

You can get more details about the Revolutionary Encarta online at http://www.microsoft.com/SQL, or call us at (800) 425-9400 and we will send you the information.

Microsoft. Where do you want to go today.
Yet another expert tells you which auto is your safest bet.

"The Chrysler Town & Country minivan is the safest auto on the market"
-- Jack Gillis, author of the Car Book

Jack Gillis, author of the Car Book, calls the Chrysler Town & Country as the “safest bet” for the consumer. As you probably know, the Car Book rates the safety of the U.S. and foreign-made cars and minivans on the basis of crash safety, fuel economy, repair costs, warranties, insurance costs and consumer complaint history. The Chrysler Town & Country with its dual front air bags, ABS, best performance on the crash test and a host of other safety measures will definitely preserve your peace of mind.

We call the Chrysler Town & Country a minivan that offers convenience and practicality beyond the aspirations of luxury, like storage space -- that sedans could only dream of. More passenger space than any luxury car short of limousine. More cargo volume than any other minivan. The Chrysler Town & Country interior pampers you and your passengers with fine leather-trimmed seating throughout. And each seat is served by its own airflow outlet. In front, dual zone temperature controls enable driver and passenger to establish personalized climate zones. You will also appreciate the convenience of a driver’s side sliding door -- the only such door on a minivan today.

The interior design is finely finished with close attention to detail. And to your serenity: We’ve put so much effort into noise reduction that you’ll hear little more than your companions’ conversation or the tones of the standard Infinity Acoustic 10 AM/FM/CD/cassette audio system. Outside, Town & Country is sculpted to please the eye and slip the wind. It has a slinky .36 coefficient of drag. And both sliding doors’ middle tracks are inconspicuously integrated into the rear window frames.

Is the Chrysler Town & Country all things for all people? No, but with all the safety and luxury and capability it offers, it could be all things for you.

Chrysler Town & Country. The Ultimate.
Florida Orange Juice -- its better than you ever knew

Facts that you didn’t know about America’s most popular drink

Did you know?

That the Center of Science in Public Interest calls Florida Orange Juice as “the most nutrient-dense beverage one can drink”. Many recent studies point to the newly researched health benefits. For instance, Florida orange juice has been found to help reduce the risk of early pregnancy birth defects and has been noted for its role in heart disease reduction.

That according to the American Cancer Society, “Florida Orange Juice decreases the risk of cancer”. The American Cancer Society has entered into a partnership with the Florida Department of Citrus to educate consumers about the relationship between a healthy diet, including Florida orange juice, and reducing cancer risk.

That more people are moving away from coffee and towards Florida orange juice. A recent study shows U.S. coffee consumption has fallen to its lowest level in a generation, and orange juice sales have reached an all time high level of sales.

So what are you waiting for?

Start your day with Florida orange juice, the choice of millions.
APPENDIX G

QUESTIONNAIRE USED IN EXPERIMENT ONE OF CHAPTER III

Name_________________
SS Number____________
Folder Number_________
Class Section  3:30  5:30

GENERAL INSTRUCTIONS

In the interest of time, each one of you will be asked to rate only one of the six articles that you read earlier.

The next page will tell you which article you have been assigned.

Please answer the questions in the order in which they are presented. PLEASE DO NOT SKIP AHEAD IN THIS QUESTIONNAIRE. ONCE YOU HAVE TURNED A PAGE DO NOT GO BACK TO IT. Don't leave any blanks.

Please remain seated until the experimenter asks you to turn over the questionnaire.
YOU HAVE BEEN ASSIGNED THE NIKE SHOES ARTICLE
Section I

We are interested in the thoughts you had while you read the Nike shoes. The next page contains the form we have prepared for you to use to record your thoughts. After you have carefully read the following instructions, you should wait for instructions to proceed. When told to begin listing your thoughts you should turn to the next page and record all the thoughts you had while reading the article related to Nike shoes.

In using the form write down the first thought in the first box, the second thought in the second box etc. Please put only one thought in each box. These thoughts may include favorable or unfavorable thoughts about the product, ideas from the article, reactions to the statements or arguments made in the article, or any other thoughts, feelings or ideas you had while you were reading the article. That is, we want to know everything you were thinking of when you read the Nike article. You will be given two and a half minutes to record your thoughts.

PLEASE WAIT UNTIL YOU ARE INSTRUCTED TO BEGIN THIS TASK
THOUGHTS I HAD WHEN I READ THE NIKE SHOES ARTICLE

_____________________________

_____________________________

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PLEASE WAIT UNTIL INSTRUCTED TO TURN THE PAGE
GENERAL INSTRUCTIONS:

You will be giving most of your responses in the following sections of the questionnaire on scales similar to the one shown below. Make sure that you put a check mark on the space you consider to be most appropriate.

For example, if you feel that drinking orange juice is extremely good, then you should place a check mark as follows

Good \[ \text{extremely} \quad \text{X} : \quad \text{neither} \quad \text{extremely} \quad \text{Bad} \]

Please place your check mark in the middle of the spaces, and not on the boundaries.

Good \[ \text{extremely} : \quad \text{THIS} : \quad \text{neither} \quad \text{NOT THIS} \quad \text{extremely} \quad \text{Bad} \]

Make sure you check every scale and don’t omit any.

Make each item a separate and independent judgment. Please don’t look back and forth through the items. There are no right or wrong answers, so don’t worry or puzzle over individual items. Work at a fairly high speed, but don’t be careless because we want your true impressions.
Section II

Before evaluating the article, we want to ask you several questions about the product that was discussed in the article.

Q1. We would like to know how you feel about Nike shoes.

Nike shoes are

Good: [extremely] [neither] [extremely] Bad
Harmful: [extremely] [neither] [extremely] Beneficial
Favorable: [extremely] [neither] [extremely] Unfavorable
Awful: [extremely] [neither] [extremely] Nice

Q2. While different people may have similar evaluations of a product, they may differ in how confident they are about that evaluation. Please tell us how confident you are about your evaluation of Nike shoes that you gave us above.


Q3. How likely are you to buy Nike brand shoes when you make your next purchase of athletic shoes?

Likely: [extremely] [quite] [slightly] neither Unlikely

Q4. People often have both positive and negative feelings towards people, products, issues etc. You may or may not have similar feelings about Nike shoes. Therefore, we want you to answer the following questions.

Considering only the positive qualities of Nike shoes and ignoring its negative ones, evaluate how positive its positive qualities are on the following scale

not at all slightly positive: [extremely] [quite] [slightly] extremely positive
Now, considering only the negative qualities of Nike shoes and ignoring its positive ones, evaluate how negative its negative qualities are on the following scale:

- not at all
- slightly negative
- quite negative
- extremely negative

Section III

In this section we will ask you questions relating to your evaluation of the Nike shoes article. Therefore, answer the following questions keeping in mind the article you read.

Q1. How favorable or unfavorable was the presented article towards Nike shoes?

-5 -4 -3 -2 -1 0 +1 +2 +3 +4 +5

Q2. Sometimes you give more weight to a piece of information, because you think it is important and sometimes you give less weight to it because you don’t consider it to be really important in your decision. How much weight did you give to the information in the article when you gave us your evaluation of Nike shoes on the previous page?

1 2 3 4 5 6 7 8 9 10

Q3. How believable was the article?

Believable 1 2 3 4 5 6 7 8 9

Q4. According to the article, consumers can increase their incidence of arthritis in later years by wearing Nike shoes for _____ years or more.

1) 1 year 4) 7 years
2) 3 years 5) 10 years
3) 5 years 6) more than 10 years

Q5. According to the article, by what percentage are Nike shoes likely to increase the consumers’ risk of getting arthritis?

1) 10 4) 35
2) 15 5) 45
3) 25 6) 55
Q6. What reason did the CAS experts state for the incidence of the benefit associated with the shoe?

Q7. We now want you to rank each of the articles you read in terms of how favorable or unfavorable (1,2,3) it was towards the brand(s) and/or products featured in it. For the article that you thought was most favorable, put IF in front of it. Put 1U in front of the most unfavorable article, and so on. Make sure you rank all the articles. For a neutral article you can put N.

- Aspartame sweeteners
- Microsoft Encarta Encyclopedia
- U.S. Automakers
- Nike shoes
- Florida orange juice
- Vitamins

Section IV

Please give now give us a list of the important features of the Nike brand of shoes.
Section V

Q1. Please rate the following statements

- **Nike shoes have good shock absorption**

- **Nike shoes have good level of breathability**

- **Nike shoes are comfortable**

- **Nike shoes are flexible**

- **For me, an increase in the risk of arthritis is**

- **For me, an increase in the risk of athletes foot is**

- **In a shoe**

  - **For me, high levels of shock absorption are**

  - **For me, high levels of breathability are**

  - **For me, high levels of comfort are**

  - **For me, high levels of flexibility are**
Q2. Sometimes you get market information about a brand that is inconsistent with your expectations from the brand and sometimes you get market related information about the brand that is consistent with your expectations. For instance, a good quality brand may have a recall, or a desirable brand may have some good attributes. We are interested in your views of the frequency with which different types of brands (good and bad) may be associated with the attribute of shock absorption.

Would a good shoe ever have a problem with shock absorption?
Likely _____: _____: _____: _____: _____: _____: _____: _____: _____ Unlikely extremely neither extremely

Would a bad shoe ever have a problem with shock absorption?
Likely _____: _____: _____: _____: _____: _____: _____: _____: _____ Unlikely extremely neither extremely

Would a good shoe ever have high levels of shock absorption?
Likely _____: _____: _____: _____: _____: _____: _____: _____: _____ Unlikely extremely neither extremely

Would a bad shoe ever have high levels of shock absorption?
Likely _____: _____: _____: _____: _____: _____: _____: _____: _____ Unlikely extremely neither extremely

After reading these instructions, we would like to have you go back to your thought listing that appeared on page 4 and score each thought. Indicate in the space to the left of each thought whether the thought was (+) FAVORABLE, (-) UNFAVORABLE or (0) NEITHER favorable nor unfavorable. To summarize, you are to go back and read each thought that you wrote down. If the thought you wrote down indicates something good or favorable, put a plus (+) in the space to the left of the thought. If the thought indicates something bad or unfavorable, put a minus (-) in the space to the left of the thought. If the thought is neutral, place a zero (0) in the space to the left of it.

Remember to rate each thought you wrote down with a ‘+’, ‘-‘, or ‘0’.

PLEASE WAIT FOR FURTHER INSTRUCTIONS.
APPENDIX H

QUESTIONNAIRES USED IN EXPERIMENT TWO OF CHAPTER IV

Name_____________________
SS Number_________________
Class Section 1:30  5:30

Part I

In this questionnaire you will be asked to evaluate all the newspaper articles that you just read. Please answer all the questions and don’t leave any blanks.

Please remain seated until the experimenter asks you to turn over the questionnaire.
GENERAL INSTRUCTIONS:

You will be giving most of your responses in the following sections of the questionnaire on scales similar to the one shown below. Make sure that you put a check mark on the space you consider to be most appropriate.

For example, if you feel that drinking orange juice is extremely good, then you should place a check mark as follows

Good \( \text{X} \) : _____ : _____ : _____ : _____ : _____ : _____ : _____ : _____ Bad
extraordinarily neither extremely

Please place your check mark in the middle of the spaces, and not on the boundaries.

Good _____ : _____ : \( \text{X} \) : _____ : _____ : _____ : _____ : _____ : _____ Bad
extraordinarily neither \( \text{NOT THIS} \) extremely

Make sure you check every scale and don’t omit any.

Make each item a separate and independent judgment. Please don’t look back and forth through the items. There are no right or wrong answers, so don’t worry or puzzle over individual items. Work at a fairly high speed, but don’t be careless because we want your true impressions.
Aspartame Sweeteners Article

Please give us your evaluation of Aspartame sweeteners. Your evaluation may be based on your prior experiences or knowledge of Aspartame sweeteners as well as the information provided in the newspaper article.

Aspartame sweeteners are

- Good
- Harmful
- Favorable
- Awful

Q2. How likely are you to buy products containing aspartame sweeteners when you make your next purchase of sweetened products?

- Likely
- Unlikely

Q3. How believable was the Aspartame sweeteners article?

- Not at all
- Very Believable

Q4. How well written was the Aspartame sweeteners article?

- Not at all
- Very Well Written
Microsoft Encarta Article

Please give us your evaluation of the Microsoft Encarta Encyclopedia. Your evaluation may be based on your prior experiences or knowledge of the product as well as the information provided in the newspaper article.

Microsoft Encarta Encyclopedia is

- Good
- Harmful
- Favorable
- Awful

Q2. How likely are you to buy the Microsoft Encarta when you make your next purchase of Encyclopedia?

- Likely
- Unlikely

Q3. How believable was the Microsoft Encarta article?

- Not at all
- Believable

Q4. How well written was the Microsoft Encarta article?

- Not at all
- Well Written
Nike Shoes article

Please give us your evaluation of Nike shoes. Your evaluation may be based on your prior experiences or knowledge of Nike shoes as well as the information provided in the newspaper article.

<table>
<thead>
<tr>
<th>Nike shoes are</th>
<th>Good</th>
<th>Harmful</th>
<th>Favorable</th>
<th>Awful</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
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<td></td>
<td>5</td>
<td>6</td>
<td>7</td>
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<td>9</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Extremely</th>
<th>Quite</th>
<th>Slightly</th>
<th>Neither</th>
<th>Slightly</th>
<th>Quite</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did you buy Nike brand shoes when you make your next purchase of athletic shoes?</td>
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<td></td>
</tr>
<tr>
<td>Q2. How likely are you to buy Nike brand shoes when you make your next purchase of athletic shoes?</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Likelihood</td>
<td>Very</td>
<td>Believable</td>
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<tr>
<td>Not at all</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Believably</td>
<td>3</td>
<td>4</td>
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<td>9</td>
<td>10</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Believability</th>
<th>Very</th>
<th>Well Written</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Believably</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>6</td>
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<td></td>
<td>7</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>10</td>
</tr>
</tbody>
</table>

Q3. How believable was the article? |

Q4. How well written was the article?
Florida Orange Juice Article

Please give us your evaluation of Florida Orange Juice. Your evaluation may be based on your prior experiences or knowledge of orange juice as well as the information provided in the newspaper article.

Florida Orange Juice is

<table>
<thead>
<tr>
<th>Good</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Bad</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Beneficial</td>
</tr>
<tr>
<td>Favorable</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Unfavorable</td>
</tr>
<tr>
<td>Awful</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
<td>8</td>
<td>9</td>
<td>Nice</td>
</tr>
</tbody>
</table>

Q2. How likely are you to buy orange juice when you make your next beverage purchase?

<table>
<thead>
<tr>
<th>Likely</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Unlikely</th>
</tr>
</thead>
<tbody>
<tr>
<td>extremely</td>
<td>quite</td>
<td>slightly</td>
<td>neither</td>
<td>slightly</td>
<td>quite</td>
<td>extremely</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q3. How believable was the Florida orange juice article?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Believable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Q4. How well written was the Florida orange juice article?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>Well Written</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>
This part of the study is a continuation of part I. In the first part you had read newspaper articles about different products/brands. In this part, you will see the newspaper ads that the companies ran in response to the publicity that they received in the newspaper articles that you read.

We need you to evaluate these ads on the scales provided in the attached sheet. Please give us your evaluation of each ad right after you finish reading it.

Please wait at your seat after you complete this task.
Aspartame Sweeteners Ad

How would you rate the arguments contained in this ad?

extremely quite slightly neither slightly quite extremely

How appropriately did the ad incorporate/address the publicity that it received?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Appropriate 1 2 3 4 5 6 7 Appropriate

How believable was this ad?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Believable 1 2 3 4 5 6 7 Believable

Microsoft Encarta Ad

How would you rate the arguments contained in this ad?

extremely quite slightly neither slightly quite extremely

How appropriately did the ad incorporate/address the publicity that it received?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Appropriate 1 2 3 4 5 6 7 Appropriate

How believable was this ad?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Believable 1 2 3 4 5 6 7 Believable
Nike Shoes Ad

How would you rate the arguments contained in this ad?

extremely quite slightly neither slightly quite extremely

How appropriately did the ad incorporate/address the publicity that it received?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Appropriate 1 2 3 4 5 6 7 Appropriate

How believable was this ad?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Believable 1 2 3 4 5 6 7 Believable

Florida Orange Juice Ad

How would you rate the arguments contained in this ad?

extremely quite slightly neither slightly quite extremely

How appropriately did the ad incorporate/address the publicity that it received?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Appropriate 1 2 3 4 5 6 7 Appropriate

How believable was this ad?

Not at all ______ : ______ : ______ : ______ : ______ : ______ : ______ Very
Believable 1 2 3 4 5 6 7 Believable
Part III

Now that after reading the ads, you have more information about the different products featured in the articles, we would like you to give us you evaluation of the products featured in the articles once again. Your evaluation may be based on your prior knowledge and experiences as well as all the information that you received today (both in the articles as well as the ads).

In the interest of time, each of you will be asked more indepth questions about only one of the products. Please turn over the page to find out which product you have been assigned.
YOU HAVE BEEN ASSIGNED NIKE SHOES
Section I

Please give us your evaluation of Nike shoes. Your evaluation may be based on your prior experiences or knowledge of Nike shoes as well as the information provided in the newspaper article and the company response ad.

<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Good</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>Harmful</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>Favorable</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>Awful</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
</tbody>
</table>

Q2. While different people may have similar evaluations of a product, they may differ in how confident they are about that evaluation. Please tell us how confident you are about your evaluation of Nike shoes that you gave us above.

<table>
<thead>
<tr>
<th>Confidence</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>Very Confident</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
</tbody>
</table>

Q3. How likely are you to buy Nike brand shoes when you make your next purchase of athletic shoes?

<table>
<thead>
<tr>
<th>Likelihood</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Likely</td>
<td>1 2 3 4 5 6 7 8 9</td>
</tr>
<tr>
<td>Unlikely</td>
<td>extremely quite slightly neither slightly quite extremely</td>
</tr>
</tbody>
</table>

Q4. People often have both positive and negative feelings towards people, products, issues etc. You may or may not have similar feelings about Nike shoes. Therefore, we want you to answer the following questions.

Considering only the positive qualities of Nike shoes and ignoring its negative ones, evaluate how positive its positive qualities are on the following scale

<table>
<thead>
<tr>
<th>Positive Qualities</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>not at all positive</td>
<td>slightly quite extremely</td>
</tr>
</tbody>
</table>

Now, considering only the negative qualities of Nike shoes and ignoring its positive ones, evaluate how negative its negative qualities are on the following scale

<table>
<thead>
<tr>
<th>Negative Qualities</th>
<th>Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>not at all negative</td>
<td>slightly quite extremely</td>
</tr>
</tbody>
</table>


Section II

We are interested in the thoughts you had while you read the Nike shoes ad. This page contains the form we have prepared for you to use to record your thoughts.

In using the form write down the first thought in the first box, the second thought in the second box etc. Please put only one thought in each box. These thoughts may include favorable or unfavorable thoughts about the product, ideas from the ad, reactions to the statements or arguments made in the ad, or any other thoughts, feelings or ideas you had while you were reading the company ad. That is, we want to know everything you were thinking of when you read the Nike ad. Please record all the thoughts you had while reading the Nike shoes ad.

THOUGHTS I HAD WHEN I READ THE NIKE SHOES AD

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Section III

Q1. We now want you to estimate the percentage of high- versus low-quality shoes that are likely to have very good versus very bad performance on the attribute of shock absorption. Low quality is defined as an average or low quality brand.

What percentage of **high quality** shoes are likely to have a **bad** performance in shock absorption?


0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

What percentage of **low quality** shoes are likely to have a **bad** performance in shock absorption?


0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

What percentage of **high quality** shoes are likely to have a **good** performance in shock absorption?


0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%

What percentage of **low quality** shoes are likely to have a **good** performance in shock absorption?


0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
LIST OF REFERENCES


Heider, F. (1958), The psychology of interpersonal relations, New York: Wiley.


Ortony, A., & Turner, T.J. (1990), "What's basic about basic emotions?", *Psychological Review*, 97, 315-331.


Wyer, R.S. (1973), "Category ratings for "subjective expected values": Implications for attitude formation and change", *Psychological Review*, 80, 446-467.

