

EXPLORING DIFFERENCES BETWEEN OLDER AND YOUNGER CONSUMERS IN ATTRIBUTIONS OF BLAME FOR PRODUCT HARM CRISES

Daniel Laufer

University of Cincinnati

David H. Silvera

University of Tromsø

Tracy Meyer

University of North Carolina at Wilmington

Daniel Laufer, Department of Marketing, 428 Carl H. Lindner Hall, University of Cincinnati, Cincinnati, Ohio 45221-0145 Email: dan.laufer@uc.edu Phone: (513) 556-7071 Fax: (513) 556-0979

David H. Silvera, Institute of Psychology, Faculty of Social Sciences, The University of Tromsø, 9037 Tromsø, Norway Email: davids@psyk.uit.no

Tracy Meyer, Management and Marketing Department, University of North Carolina at Wilmington, 601 South College Avenue, Wilmington, North Carolina 28403-5902

Email: meyert@uncw.edu Phone: (910) 962-7202 Fax: (910) 962-3815

EXECUTIVE SUMMARY

Recently, a number of articles suggest that consumer segments assess blame differently for a product harm crisis. For example, Laufer and Gillespie (2004) found in two separate experiments that women blame a company more than men for a product harm crisis in which it is unclear whether the company, consumers, or situational factors were responsible for the crisis. Studies in psychology also suggest that blame attributions can differ across consumers in different countries. In a review of studies comparing North American and East Asian perceivers, researchers concluded that the sharpest differences in attributions for the cause of an individual's behavior lie in the weight accorded to contextual constraints and to pressures imposed by social groups (Choi, Nisbett and Norenzayan 1999). In a consumer context, Laufer (2002) suggests that based on these findings, consumers in individualistic societies may be more likely to attribute product failures to a company whereas consumers in collectivistic societies may be more likely to consider situational factors external to the company.

This paper reviews the literature in marketing, gerontology and psychology to examine whether another segmentation variable, age, impacts attributions of blame for product harm crises. In the paper we explore possible differences between older and younger consumers in relation to antecedents of attributions, as well as to the attributional dimensions associated with consumer blame attributions. Based on our review of the literature, it appears that age is likely to impact the interpretation of product harm crises in a variety of ways. The net effect of these influences on blame attributions to companies is likely to depend on the circumstances surrounding the judgment context.

Despite widespread perceptions regarding the vulnerability of elderly consumers to harm, no evidence was found in the literature to support that the elderly perceive themselves as personally vulnerable. However, Heckhausen and Schulz's (1995) analysis suggests that this is likely to be the result of "secondary control processes" by which elderly individuals who lack the ability to achieve actual control over their environment resort to biased information processing to achieve perceived control. According to these researchers, this type of biased information processing increases with age, and thus it is reasonable to expect the same type of biased information processing in the form of defensive attributions and blame a company for a product harm crisis as Laufer and Gillespie (2004) found for women. Defensive attributions are particularly likely to occur for product harm crises involving products that focus on the elderly market due to increased similarity with victims of the crisis.

The role of limitations in the cognitive ability of the elderly in assessing blame for product harm crises is also likely to be context dependent. Although a substantial body of research indicates that age-related cognitive deficits limit the ability of elderly individuals to engage in deep processing of new information, Yoon's (1997) findings that the elderly are better able to process information in the morning and that 80% of older consumers read the newspaper in the morning (Yoon 1997) suggests that elderly consumers will often have the opportunity and cognitive resources to perform detailed processing of information that does not differ from younger consumers. However, when they are exposed to a product harm crisis through other media, or perhaps when they are personally affected by the crisis, older consumers are more likely to rely on prior schemas (rather than information specific to the current crisis) when making blame attributions.

Prior beliefs might play a role in differences between older and younger groups in the assessment of blame in a product harm crisis, however in the direction of reduced blame to the company. Hart et al. (1997) found for example that older consumers have better developed schemas for injury-causing situations due to their greater life experience. It is possible that this results in an accumulated understanding of the power of situational forces, and thus a tendency for older consumers to place less blame on companies than younger consumers. However, this reliance on prior knowledge also implies a lack of attention to the specifics of the immediate situation. As such, older consumers might be less responsive in unambiguous product harm crises where the evidence clearly suggests that one of the parties is to blame. Thus, when available evidence points

toward company blame, older consumers might be less likely to blame the company than younger consumers, and vice versa when evidence points toward consumer or situational blame.

Finally, findings from studies examining differences between younger and older consumers in their perceptions of Weiner's attributional dimensions may suggest less blame to the company on the part of the elderly in product harm crises in certain situations. Evidence suggests that older consumers are less impacted by the fundamental attribution error in certain situations and are also less likely to infer controllability. Since the dimensions of locus and controllability impact overall assessments of blame (Klein and Dawar 2004; Weiner 1980), elderly consumers might be less likely to exhibit negative consequences associated with blaming the company, such as reduced purchase intentions and negative word of mouth.

Conclusion

Collectively, existing research comparing attributions and cognitive abilities between the elderly and younger adults suggests that studying age differences in blame attributions for product harm crises is a potentially fruitful domain for future research. Examining how the net effect of these influences impact differences between older and younger consumer segments in judgments of culpability for product harm crises could potentially enrich our understanding of the impact of aging on attributions and its implications in the domain of consumer behavior.

Limitations and Future Directions

This is a conceptual model. Testing the model with quantitative empirical data in various contexts would be helpful.

Keywords: Product Harm Crisis, Attribution Theory, Aging, Segmentation

Exploring Differences Between Older and Younger Consumers in Attributions of Blame for Product Harm Crises

A product harm crisis can have a devastating impact on a company. Product-harm crises are defined as “discrete, well publicized occurrences wherein products are found to be defective or dangerous” (Dawar and Pillutla 2000, p. 215). It is worth noting that the damage to a company can be considerably greater than the cost of a potential product recall (Davidson and Worrell 1992). In fact, the erosion of market based assets that depend on consumer trust, brand attitudes and consumers’ willingness to purchase in the future (Srivastava, Shervani, and Fahey 1998) is likely to be a more significant cost of the product harm crisis. Examples of high profile product-harm crises include contaminated Coca-Cola cans in Belgium, the Exxon Valdez oil spill in Alaska, the Tylenol poisoning crisis in the United States, benzene contamination of Perrier mineral water in the United States and, most recently, defective Firestone tires in the United States, Venezuela and Saudi Arabia.

How the consumer assesses blame in a product-harm crisis has important implications for a company. If the consumer blames the company for a product-harm crisis, this can have negative consequences for the consumer’s future purchase intentions. A number of empirical studies point to the negative ramifications of consumer attributions of blame in a product failure situation. Folkes (1984) found that consumers report higher levels of anger for negative restaurant outcomes as blame is attributed increasingly to the restaurant. In a subsequent study, Folkes, Koletsky, and Graham (1987) also found that consumer attributions of blame toward airlines for flight delays relate positively to anger and negatively to future purchase intentions. Siomkos and Kurzbard (1994) found that even for a company’s other products, a product-harm crisis can be detrimental. On the other hand, the more consumers blame themselves for a product failure, the more likely they are to do nothing when dissatisfied (Oliver 1997).

Recently, a number of articles suggest that consumer segments assess blame differently for a product harm crisis. For example, Laufer and Gillespie (2004) found in two separate experiments that women blame a company more than men for a product harm crisis in which it is unclear whether the company, consumers, or situational factors were responsible for the crisis. These experiments involved two different situations; consumers hospitalized after drinking orange juice and serious accidents associated with tire blowouts. In addition to finding differences in blame attributions between men and women, Laufer and Gillespie (2004) analyzed the mechanism underlying these differences. They found that women blame a company more than men because they feel more personally vulnerable to harm. In other words, women were found to be concerned with the possibility that a similar crisis could occur to them, which generated more blame to the company through defensive attributions (Burger 1981).

In addition to differences between men and women in blame attributions, research in psychology also suggests that cross-cultural differences exist in blame attributions, particularly between Western and Asian cultures. In a review of studies comparing North American and East Asian perceivers, researchers concluded that the sharpest differences in attributions for the cause of an

individual's behavior lie in the weight accorded to contextual constraints and to pressures imposed by social groups (Choi et al. 1999). In a consumer context, Laufer (2002) suggests that based on these findings in the psychology literature, consumers in individualistic societies may be more likely to attribute product failures to a company whereas consumers in collectivistic societies may be more likely to consider situational factors external to the company.

This paper examines whether another consumer segment, the elderly, differ from younger segments of the population in how they assess blame in a product harm crisis. This is of great importance to companies who have to deal with the ramifications of a product harm crisis. Should they expect different consumer segments (based on age) to react in a similar manner in terms of assessing culpability for a product harm crisis? Based on studies examining other consumer segments previously described, there is doubt whether younger and older consumers will react identically to a product harm crisis. In fact, Laufer and Gillespie (2004, pp.153-154) state that "since personal vulnerability plays a role in differences in blame attributions between men and women, we would expect that older consumers due to their diminished physical capabilities may also feel more personally vulnerable in a product harm crisis. This in turn may cause older consumers to blame companies more for product harm crises than younger consumers".

Understanding attributional tendencies in older consumers is particularly important for two reasons. First, the elderly market is growing in both size and importance. According to the U.S. Census Bureau, over 21% of the U.S. population of 270 million were 55 years of age or older, and this percentage is expected to increase to 30% by 2025 due to increasing life expectancies and the aging of baby boomers (U.S. Census Bureau 2000). Based on the current size and projected growth of the elderly market, Moschis, Curasi and Bellenger (2004, p. 132) claimed that "their needs, wants, and expectations will come to dominate marketing strategy." Second, there is substantial evidence that elderly individuals process information differently than younger adults. Schaie and Hertzog (1983) argue that declining cognitive capacity begins as early as middle adulthood under conditions that demand intense cognitive processing. In elderly adults, research has demonstrated significant declines in information processing speed, encoding strategies, and the ability to efficiently retrieve information (John and Cole 1986), with the result that elderly consumers have greater problems with semantic processing of printed information and do not derive the same learning benefits as younger consumers when information is presented on television (Cole and Houston 1987). Moreover, Heckhausen and Schulz (1995) suggest that the decline in cognitive and physical abilities in older adults leads to changes in motivational processes as well, for example in the form of an increased tendency to engage in self-protecting attributions. Collectively, these results suggest both that elderly

consumers process information differently than younger consumers and that examining these differences might provide some insights into how to approach an increasingly important market segment – differences in reactions to a product harm crisis by younger and older consumers may also suggest that different strategies need to be developed by companies for each of these consumer segments to respond to a crisis.

Finucane et al. (2002) argued that it is difficult to estimate the impact of basic research results demonstrating age-related processing deficits on naturalistic decision situations, and thus called for researchers to investigate age differences in cognitive functioning in real-world judgment contexts. The present paper represents a preliminary effort in this direction by providing an examination of how and whether older and younger consumers differ in their attributions of blame. As suggested by Gregoire (2003) in his review of the literature on the impact of aging on consumer responses, we examine the relevant literature in marketing as well as the literature in gerontology and psychology to examine these issues. In the following sections of this paper, we examine possible differences between older and younger consumers in the relation to antecedents of attributions, as well as to the attributional dimensions associated with consumer blame attributions.

Antecedents to Attributions

Much of the recent research on attribution theory in the context of product failure has focused on consequences of consumer attributions. However, it is equally important to understand the determinants or antecedents of consumer attributions. Despite the importance of this topic, few studies have examined how consumers arrive at blame attributions (Folkes 1988; Weiner 2000). The antecedents of attributions help us understand the reasons underlying the attributions consumers make to events in their lives such as product failure. In reviewing the literature on attribution theory in consumer behavior, Folkes (1988) identified three major categories of antecedents for consumer attributions: motivations, information and prior beliefs. The following sections will examine how the elderly might differ from younger consumers in terms of these antecedents.

Motivations - As previously mentioned, researchers have found that personal vulnerability plays a role in blame attributions in product harm crises (Laufer and Gillespie 2004). Specifically, these researchers found that global feelings of disempowerment or lack of control can lead to increased feelings of personal vulnerability in the specific context of a product harm crisis, which in turn leads to increased blame to the company involved in the crisis. These findings correspond with social psychological research related to the *defensive attribution hypothesis*. The defensive attribution hypothesis proposes that when an incident results in a more severe outcome, more blame will be attributed to a potentially responsible party (Shaver 1970), and this proposition has received substantial empirical support (see Burger 1981; Robbennolt 2000 for reviews).

The primary explanation for the association between outcome severity and blame is motivational in nature and relates to harm protection. According to Walster (1966) and Shaver (1970), people assign responsibility for an accident in order to believe that such an accident would not happen to them. Fiske and Taylor (1991, p. 85) describe this motivational explanation of the impact of perceived outcome severity on blame attributions as follows: "As the consequences of an action become more severe, they become more unpleasant, and the notion that they might be accidental becomes less tolerable: The fear that the same thing might involve the self becomes a realistic possibility. Seeing the actions as avoidable and blaming a person for their occurrence makes the actions more predictable and hence avoidable by the self." This explanation ties severity with

personal vulnerability and was supported by Burger's (1981) meta-analysis, which concluded that people are more prone to make defensive attributions when accidents are relevant to them.

An important question, then, is whether elderly consumers feel more vulnerable to harm than younger consumers, and thus have an increased tendency to blame the company for a product harm crisis. Objectively, older individuals often have higher incomes and/or greater personal wealth than younger consumers (Moschis et al. 2004), and are thus less personally vulnerable to financial loss. However, whereas the elderly do have more personal wealth, they have less potential to accumulate additional wealth which may lead to greater personal vulnerability. Despite the occurrence of personal vulnerability resulting from financial loss, the majority of the existing literature concerned with defensive attributions has operationalized severity as the degree of physical harm caused by an accident (Burger 1981; Robbenolt 2000). It is also more common to focus on physical risk factors such as potential illness, injury, or death in association with product-harm crises. In terms of physical risk, older individuals experience declining physical and cognitive abilities as well as greater susceptibility to disease, with the end result being that chronic illnesses are an increasingly important concern later in life (Schneider and Rowe 1991). Moreover, research evidence indicates that people of all ages are aware that mental, physiological, and psychological decline is *generally* associated with old age (Heckhausen and Baltes 1991).

However, despite the fact that older as well as younger individuals realize that old age is generally associated with decline, there is some doubt that they acknowledge this decline in themselves. Older people perceive less decline in themselves than in others of the same age and do not admit to significant decline until they are very old (Heckhausen and Kreuger 1993). Consequently, elderly individuals do not tend to view themselves as more personally vulnerable – Benet, Pitts, and LaTour (1993, p. 46) reviewed the literature and found that “despite the pervasiveness of these perceptions of the vulnerability of the elderly, however, many authorities contend that today's senior citizens are actually not very different from younger adults, and that we should not presume that the elderly as a whole are a particularly vulnerable audience.”

How do we reconcile the physical evidence and global beliefs that that the elderly as a group experience reduced control and increased vulnerability with the perception of each individual elderly person that he or she has not experienced any decline? One solution to this dilemma is suggested by Heckhausen and Schulz (1995). These researchers proposed that there are important age-related differences in primary vs. secondary control processes. Primary control processes are active and outwardly directed and represent an effort to change the environment to fit one's one desires, whereas secondary control processes are primarily cognitive and inwardly directed and involve altering one's perceptions so that the reality one perceives seems more acceptable. Importantly, primary control processes appear to be stable across the adult lifespan whereas secondary control processes increase with age (Heckhausen and Schulz 1995). In other words, the elderly are particularly prone to engage in motivated, biased information processing in order to make their objective loss of control seem more acceptable (Heckhausen and Schulz 1995). This suggests that the elderly will also be motivated to process information in a biased and self-protective manner when evaluating a product-harm crisis, particularly to the extent that they feel

personally threatened when they either view themselves as being similar to the victims (Burger 1981) or view the product domain as especially personally relevant (e.g., health care issues).

Information - Information refers to the data surrounding the immediate attributional context. Although this information does not vary based on age, the way in which the available information is processed is very likely to be age-dependent. Thus, in addition to motivational factors such as defensive attributions, it is important to examine how the processing of attributional information varies with age. To do this requires a brief review of the literature on age-related differences in cognitive performance and information processing.

There is a substantial body of literature documenting a decline in cognitive performance as a result of reduced processing resources caused by the aging process (Craik 1983; Craik and Byrd 1982; Hasher and Zacks 1979; Zacks and Hasher 1988). Moreover, research suggests that this decline might begin as early as middle adulthood when circumstances require intense or complex cognitive processing (Schaie and Hertzog 1983). A variety of deficits has been identified in information processing in older adults, including reduced information-seeking (Johnson 1990), increased reliance on heuristic processing in preference to analytic processing (Park 1999), declines in working memory (Salthouse and Babcock 1991), reduced information processing speed (Salthouse 1996), problems both encoding and retrieving information (John and Cole 1986), and reduced information processing speed (Salthouse 1991). Importantly, these general deficits have been shown to impact information presented via the two forms of media that are most likely to be used in relation to product-harm crises: printed information leads to greater problems with semantic processing in elderly consumers than in younger consumers, while presenting information on television has a significant memory improvement for younger adults but has little or no effect on the elderly (Cole and Houston 1987). Research by Blumberg and Silvera (1998) also suggests that cognitive ability, and particularly the ability to encode and integrate complex information, is a pre-requisite for making valid and accurate attributions.

Although this research suggests that the elderly might have a general deficit in information processing relative to their younger counterparts, Yoon (1997) found that the time of day plays a role in the depth of processing for the older consumer, such that exposure to information considered incongruent with expectations during the morning (as opposed to the evening) leads to detailed processing and no performance impairment when compared with younger subjects. Yoon's (1997) finding that 80% of older consumers read the newspaper in the morning suggests that when an older consumer typically learns about a product harm crisis from reading a newspaper article, the detailed processing of product harm crisis information might not differ from processing by younger adults.

The question of whether global processing deficits result in decreased performance in naturalistic judgment tasks remains an issue of theoretical debate. Some researchers argue that older individuals are able to combine "wisdom," careful selection of which information to process, and elaborate accumulated knowledge systems to perform as well as their younger counterparts on everyday problem solving tasks (e.g., Baltes 1993). Others argue that everyday problem solving is essentially the same as the cognitive tasks performed in laboratory experiments except with

added complexity, such that older people should perform significantly worse than their younger counterparts. Although this debate is far from resolved, recent research by Finucane et al. (2002) suggests that the elderly might lack certain essential skills that are needed to solve everyday problems. Specifically, these researchers found that, compared to younger adults, elderly individuals asked to perform an everyday problem-solving task (evaluating and choosing between health plan options) experienced more comprehension difficulties and were less able to integrate and reason about information in an internally consistent manner.

Although the preceding argument suggests that elderly consumers are likely to have information processing deficits relative to younger consumers in most contexts, recent research suggests that the amount of time available to make a judgment might be an important moderator variable. Blanchard-Fields (1994) and Chen and Blanchard-Fields (1997) both found that older adults made more biased attributions than younger adults when forced to make quick judgments. However, when given more time to think about the situation, older adults were better able to correct their biased judgments and no age differences in attributions were observed. Chen and Blanchard-Fields' (1997) explanation for this difference was that, when older individuals made judgments under time constraints, they were forced to rely on pre-existing judgment schemata to a greater extent than younger individuals. This is consistent with research showing that the elderly are less likely to seek additional information and are more likely to rely on heuristic rather than analytic processing, but also suggests that extra time to make a decision might attenuate or even eliminate these problems.

Collectively, research in this area indicates that the elderly are likely to have important information processing deficits and decreased decision quality under most circumstances. However, Willis (1991) observed that it is difficult to get consistent evidence for decreased decision quality in the elderly because of complex interactions between individual, task, and context factors. This is also likely to be the case for blame attributions. Under optimal circumstances where information is presented in the morning, is relatively straightforward and simple, and is presented in a slow or self-paced fashion, it is likely that the elderly will make blame attributions very similar to those made by younger adults. In contrast, to the extent that information is presented late in the day, is highly complex, and is presented and must be evaluated rapidly, elderly consumers are likely to be forced to rely more heavily on their pre-existing schemas than on the actual information provided and judgment quality is likely to be reduced.

Prior Beliefs - Prior beliefs represent the impact of consumers' pre-existing hypotheses, suppositions and expectations on attributions of blame in the context of a product harm crisis. As noted in Folkes' (1988) review, prior beliefs are the last of the three major factors that influence attributions. There are two ways in which prior beliefs could cause differences in blame attributions between the elderly and younger adults. First, it is possible that older consumers hold different prior beliefs relevant to product harm crises than younger consumers. For example, Schewe and Meredith (2004) argue that shared environmental events (e.g., living through the depression) can create values and beliefs that remain relatively unchanged through the lifespan. Consistent with this proposition, Hart et al. (1997) found that older consumers have

better developed schemata for injury-causing situations due to their greater life experience. These highly developed schemata can subsequently have an important impact on judgments. For example, Smith (1991) found that a person's schema regarding criminal activity affected verdict decisions. Given their greater life experience, it seems reasonable to postulate that older consumers might also have better developed schemata in relation to product-harm crises and that these schemata influence their assessments of culpability.

A second issue to consider is whether the elderly differ from younger adults in the likelihood that their prior beliefs will be applied to the judgment at hand. As noted above, elderly consumers are frequently unable or unwilling to engage in deep analytic processing of the information at hand and thus might be forced to rely on heuristic processing that is heavily based on pre-existing knowledge structures. Thus, elderly consumers might be more likely to rely on prior beliefs than younger consumers when making blame attributions.

A number of studies support this argument. For example, older white subjects were found to show stronger discriminatory effects towards black defendants than were observed in studies conducted with college students (Feild 1976; Gray and Ashmore 1976). This is not necessarily the result of increased prejudice among older individuals; instead, it is likely to reflect limitations in the cognitive resources of the elderly. For example, von Hippel, Silver, and Lynch (2000) found that the ability to inhibit application of socially undesirable stereotypes plays a greater role in stereotyping behavior than differences in levels of prejudice.

In the context of a product harm crisis, information about brand or country of origin might function as the same type of category-level knowledge structure that racial stereotypes fill in research on prejudice. Moreover, existing research has already demonstrated that each of these types of information can influence assessments of blame in a product harm crisis. Su and Tippins (1998), for example, found that consumers are more likely to blame the manufacturer of a little-known brand than that of a highly visible brand. The authors suggest that this is due to the customers' tendency to infer high product quality from high brand visibility. Laufer (2002) replicated the brand effect in a different product harm crisis and also found that country of origin information can have a stereotyping effect in a product harm crisis and influence perceptions of culpability. Information regarding the characteristics of a company and the country of origin can be learned by the consumer through exposure to external parties, and commentary by the media for example has been shown to impact consumers' perceptions of a product harm crisis (Siomkos and Malliaris 1992).

Despite the fact that these experiments did not include older subjects, evidence suggesting that people with less cognitive resources are more likely to apply category-level information such as racial stereotypes and that elderly people are more likely to have a shortage of available cognitive resources, raises the possibility that elderly individuals might be more likely to rely on extrinsic cues such as brand and country of origin information to infer culpability for a product harm crisis. More generally, research in this domain suggests that, when making blame attributions in relation to a product harm crisis, (a) the elderly will be more influenced by their

prior beliefs, schemas and stereotypes, and (b) the elderly will be less influenced by the information contained in reports of events with the specific product-harm crisis under evaluation.

Summary - The three major categories of attributional antecedents presented by Folkes (1988) are integrated with potential differences between elderly and young adult consumers in the model shown in Figure 1. This model includes two important modifications to Folkes' (1988) description of attributional antecedents.

First, the information component has been divided into two elements: (a) Information, which refers to the content of data immediately relevant to an attributional context such as a product-harm crises (e.g., how many people were injured, potential causes for the crisis, etc.); and (b) Information Processing Capability, which refers to the ability to process information relating to the crisis in the formation of an attribution. Although information is clearly important for making an attribution, as noted above, the greatest difference between elderly and younger adult consumers is likely to be related to information processing.

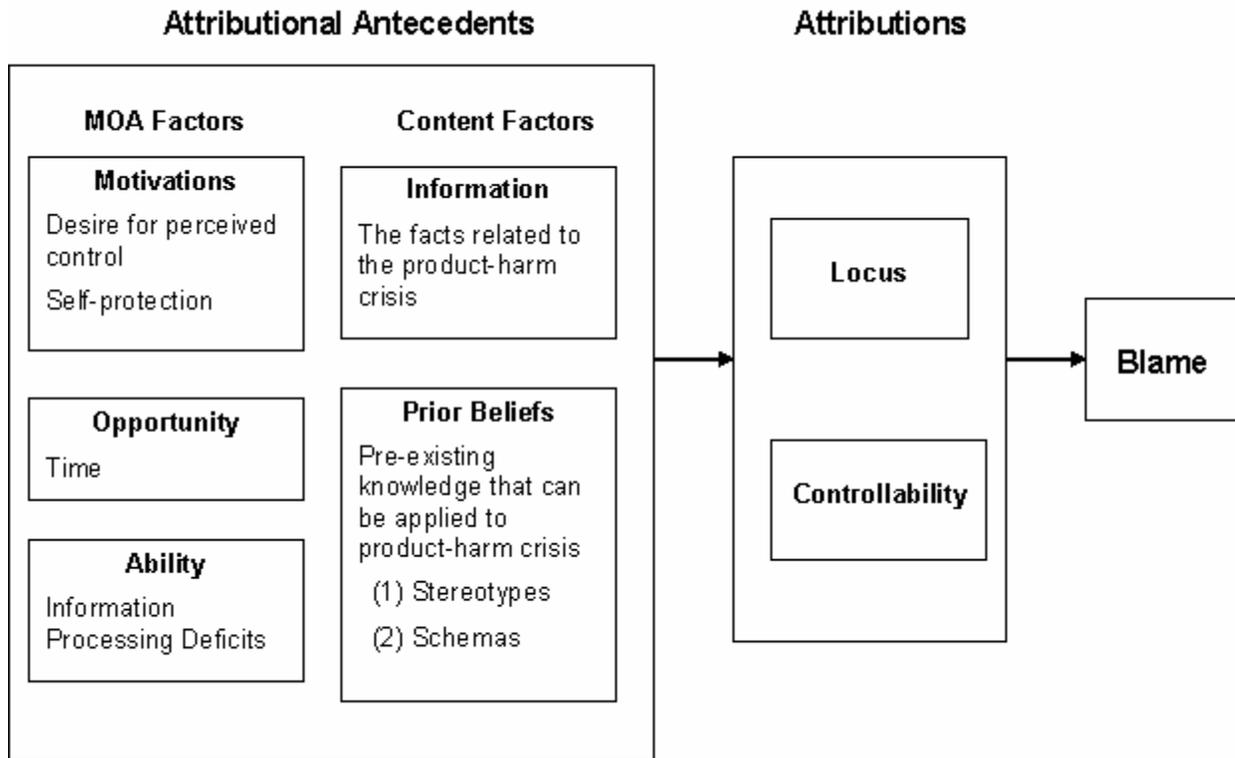
Second, the Motivation, Opportunity and Ability (MOA) framework to processing information (MacInnis, Moorman, and Jaworski 1991) is integrated in our model to help understand when information about the crisis vs. prior beliefs is more likely to be used to assess blame for the crisis. The MOA framework suggests that factors relating to people's motivation, opportunity and ability impact the degree to which information is processed. Whereas motivational and ability factors are covered in the preceding discussion relating to attributional antecedents, opportunity is not discussed. Older consumers may have more time to process information relating to a product harm crisis because of their status. Many are retired and therefore have more time to spend examining information relating to a product-harm crisis when compared with younger people who are more likely to be working. We have therefore added this factor to our model in Figure 1 since it could help explain differences between older and younger individuals in how they utilize information relating to the crisis in forming their blame attributions.

An important aspect of our model is that the attributional antecedents interact with each other and collectively impact the formation of attributions. According to the analysis in the preceding sections, the areas that we believe are most likely to produce differences in attributions between elderly and younger consumers are related to motivational and ability factors which impact the application of relevant information to the attributional judgment at hand. These differences are likely to come in two forms. First, motivational factors related to the desire for perceived control and the goal of protecting the self against potential threat, are likely to be stronger in the elderly (Heckhausen and Schulz 1995). These motivational factors can influence memory for relevant information, accessing of prior beliefs, and even the selection of information processing strategies in biased ways that lead to conclusions that help a person to reach conclusions that they are motivated to reach (Kunda 1990; Silvera and Laufer 2005), even when the person believes that they have analyzed information in a purely objective fashion (Pyszczynski and Greenberg 1987). Second, there are age differences in the ability to process information. Elderly consumers are likely to have cognitive deficits that impair their information processing ability,

particularly in terms of processing speed and memory. These deficits might be partially offset by greater life experience, more elaborate schemas, and the ability to selectively process the most important information (Baltes 1993) in relation to a product-harm crisis.

FIGURE 1

Antecedents of Attributions and Blame¹



¹Weiner (1980) suggests that blame is related to both the locus and controllability dimensions. These two causal dimensions of attributions lead to an overall judgment of culpability. Klein and Dawar (2004) found empirical support for this in a consumer context in two experiments incorporating product harm crises scenarios.

Attributional Dimensions and Blame

In addition to examining the antecedents to blame attributions, another important issue to examine is whether differences exist between older and younger consumers in how they perceive attributional dimensions associated with blame for a negative event such as a product harm crisis. Despite the relatively few studies examining the determinants of consumer attributions in a product failure context, a number of studies have examined the consequences of consumer attributions. Most of these studies have been based on Weiner’s attributional framework.

Whereas early attribution theory was purely cognitive, Weiner's approach takes affect into account. Weiner's theory links emotional responses to outcomes and attributions and distinguishes among three dimensions of attributions: stability, locus, and controllability. Weiner's theory incorporates a cognition-emotion-action process. In the first stage the individual evaluates the outcome and typically experiences happiness or sadness depending on the outcome. In the next stage the individual makes an attribution for the outcome (for instance effort or luck), which results in further emotions that are attribution dependent (pride, guilt).

Weiner (1980) suggests that blame is related to the locus and controllability dimensions and that these two dimensions of attributions lead to an overall judgment of culpability. Klein and Dawar (2004) found empirical support for this in a consumer context in two experiments incorporating product harm crisis scenarios. The locus dimension refers to the agent that is viewed as primarily responsible for a particular outcome. Traditionally, this has referred to a distinction between dispositional and situational causes, but in the case of a product harm crisis, there are at least three loci for potential blame: the company, consumers of the product, and external situational factors. Previous research has shown that blame attributions to the company result in several negative consequences such as consumer anger, negative word of mouth (Folkes 1988), and consumer feelings that they deserve a refund and an apology (Folkes 1984). The controllability dimension reflects the power available to the consumer or other parties such as the manufacturer or retailer in the situation to alter the result. The issue is whether any of the actors has control over the variables that caused the situation to occur. If consumers attribute a disappointing outcome such as a bad service experience to controllable causes, they tend to assess more blame to involved entities such as the manufacturer or retailer. For example, Folkes (1984) found that when product failure is under the control of the firm, consumers feel angry and desire to hurt the firm's business.

An important question is whether older individuals perceive these attributional dimensions differently than younger individuals for an identical negative outcome. The following is a discussion of possible differences between older and younger individuals on the attributional dimensions locus and controllability and the possible consumer behavior implications in the context of a product harm crisis.

Locus - Existing research suggests that, at least under some circumstances, older individuals are less prone to biased, overly dispositional attributions (i.e., the Fundamental Attribution Error) than their younger counterparts (Blanchard-Fields 1994). Blanchard-Fields (1994) suggests that these results are due to older adults' accumulated experience with the world and how it operates. She believes that what is learned over the lifespan offers the potential to change the perception of events, and this knowledge is used within the context of ambiguous problem settings. Hess (1994) agrees with this view and believes that adults continue to learn and change as they age.

It is worth noting, however, that lower levels of the fundamental attribution error among the elderly were not replicated when attributions were made under time constraints. Under these conditions, Follett and Hess (2002) found that older and younger individuals were equally prone to exhibit the fundamental attribution error in their causal attributions, and that both groups made

more dispositional attributions than middle-aged individuals. This suggests that, although there might be advantages to attributional accuracy associated with greater life experience, these advantages can be offset by processing speed disadvantages when operating under time constraints. This highlights the importance of the presentation medium when evaluating how elderly individuals evaluate product harm crises. In the optimal situation where they are safely removed from the crisis (and therefore do not have “cognitive load” based on stress associated with the crisis) and learn about the crisis via a self-paced medium like the newspaper, elderly consumers are likely to make judgments that are more situational than younger consumers, and thus less likely to blame the company. However, to the extent that judgments are made under time pressure, under duress, or based on information from a more fast-paced medium, this tendency is likely to vanish or even be reversed.

This interpretation suggests that, at least under optimal judgment conditions, older observers might be more open minded to the complexities of the situation and might therefore assess less blame to the company if culpability is unclear. Considering that the elderly selectively seek out these conditions (Yoon 1997), it is likely that, on average, we should find less of the negative consequences of company blame such as dissatisfaction, complaining activity, negative word of mouth, anger towards the company and decreased purchase intentions among older consumers. A number of studies have in fact found support for lower levels of dissatisfaction among older consumers when compared with younger consumers. Whereas these studies do not relate directly to product harm crises, they are consistent with the proposition that differences in locus judgments between elderly and younger consumers lead to reduced blame in elderly consumers. Ash, Gardiner and Quelch (1980), for example, found that a younger age group (age 18-54) was significantly more dissatisfied, on average, than the older segment (age 55 and over) based on data collected from 1,052 subjects spanning 20 repairs and general service categories. A review of data collected by the U.S. Department of Agriculture by Bearden and Mason (1979) found similar results in a different product category: Although 64% of the consumers surveyed had been highly dissatisfied with one or more food products during the last year, dissatisfaction decreased to 50% for the elderly segment.

Controllability - Another dimension where older and younger consumers might differ is in the area of controllability. Heckhausen and Baltes (1991) found that increasing age is associated with an increasing belief in the lack of controllability associated with negative characteristics and abilities. Weiner and Graham (1989) also found support for this in an experiment involving a scenario depicting a person failing to perform a task. Participants were asked to rate the degree to which they believed the individual had control over completing the task. Ratings of controllability were significantly lower among the older subjects (70 or older) when compared with college students. Weiner and Graham (1989) also found in the same experiment that with increasing age there were significantly lower levels of anger towards the person failing to perform the task. This finding is consistent with previous studies that established a link between levels of controllability and anger.

These findings suggest that older consumers would be more likely to give the company the benefit of the doubt in a product harm crisis. They are less likely to infer that the company had

control over events related to a product harm crisis and are therefore less likely to exhibit the emotions and behaviors associated with higher levels of controllability such as anger towards the company and a desire to hurt the firm's business.

IMPLICATIONS

It is worth noting that very few studies in the fields of Psychology and Marketing have examined differences in attributions between older and younger subjects. However, based on our review of the literature, it appears that age is likely to influence the interpretation of product harm crises in a variety of ways. The primary influences that the present literature review indicates are shown in Table 1.

Considering the growing importance of the elderly market together with the likelihood that there are important differences between blame attributions made by the elderly and by younger adults, it seems clear that empirical research investigating blame attributions in the elderly can make a valuable contribution to the field of marketing. An important question, then, is how one might proceed with such a research program. Finucane et al. (2002) argued strongly for the importance of studying everyday problem solving contexts because decision-making performance in these contexts can be substantially different than in abstract laboratory tasks that are our primary source of evidence for information processing deficits in the elderly. Perhaps most importantly, naturalistic contexts allow the elderly to apply the vast store of knowledge that they have accumulated over their lifetime, and potentially to use this knowledge to offset deficits in processing speed, memory, and other cognitive domains. We are inclined to agree with this argument, and thus to recommend to examine this issue through evaluations of product-harm crises. We would of course expect that product-harm crises involving more familiar products would generate a greater reliance on these rich reservoirs of knowledge when compared with product-harm crises involving unfamiliar products. It is therefore important to choose a product that is similar in terms of familiarity among both older and younger consumers in order to control for this factor.

A natural hindrance to examining product-harm crises is the fact that they are relatively infrequent events, and the products and situations involved are impossible to predict or control. This, together with the fact that it is desirable to be able to manipulate certain aspects of the product-harm crisis to see how variations in the scenario impact blame attributions, means that in most cases it will be necessary to generate artificial product-harm scenarios.

Perhaps the most important differences between elderly and young adult consumers in terms of basic cognitive processing are (a) cognitive deficits that make it more difficult for the elderly to process new information fully, particularly when that information is complex or the decision-making context requires rapid information processing, and (b) their relatively strong reliance on prior beliefs and pre-existing knowledge. These differences are likely to have testable implications in the context of blame attributions as well. The first of these issues can be examined experimentally by adding or removing time pressure and/or generating more

complicated judgment contexts, perhaps by presenting several potential causes for the product-harm crisis and asking observers to evaluate their relative importance.

The question of how prior beliefs impact blame attributions is potentially more complicated, and thus bears elaboration. It is likely that prior beliefs in the form of attitudes, or evaluative beliefs about the target objects (e.g., the product involved in the crisis or the consumer group impacted by the crisis), will exert the greatest influence over blame attributions. In order to examine this influence, prior beliefs must be assessed prior to and outside the context of a product-harm scenario. Importantly, attitudes have been shown to be complex structural entities. In addition to the evaluative component of attitudes, substantial research has indicated that attitude strength is an important moderator of when and to what extent pre-existing attitudes are applied to a particular judgment or behavioral context. Attitude strength has been defined by various researchers as certainty (Gross, Holtz, and Miller 1995), complexity/ambivalence (Thompson, Zanna, and Griffin 1995), extremity (Abelson 1988), accessibility in memory (Fazio 1995), and a variety of other things. However, recent research by Holland, Verplanken, and van Knippenberg (2003) has determined that all of these factors can essentially be condensed to two dimensions of attitude strength: Centrality, which refers to the degree to which the attitude is personally important and connected to the self and personal values; and commitment, which refers to certainty and the likelihood that the attitude will change. Although these two dimensions are typically correlated, they have been shown to differentially predict judgments and behavior (Holland et al. 2003). With this research in mind, it seems reasonable to suggest that a thorough examination of the impact of prior beliefs on blame attributions would require pre-testing of participants on the valence, centrality, and commitment of their attitudes toward both the company and the victims of product-harm crisis scenarios.

LIMITATIONS AND FUTURE DIRECTIONS

The elderly are a large and rapidly growing consumer segment. Researchers in a variety of marketing domains have begun to recognize this fact and have called for more research related to elderly consumers both to increase our understanding of this important market segment and to guide companies on how to approach and interact with elderly consumers successfully (Moschis 2003). Moreover, one of the best-documented differences between the elderly and younger adults can be seen in how they process information. As such, a natural place to start such investigations is by examining the types of “everyday” decisions and judgments elderly consumers make in marketing contexts. One such context that we believe can produce interesting and valuable results is blame attributions in relation to product-harm crises, and examining how the net effect of these influences impact differences between older and younger consumer segments in judgments of culpability for product harm crises has important implications for companies. If, for example, older consumers assign more blame on the company than younger consumers, companies will have to react more quickly and decisively to minimize the damage (Dawar and Pilluta 2000). This topic merits greater attention from researchers and has the potential to enrich our understanding of the impact of aging on attributions as well as its implications in the domain of consumer behavior.

TABLE 1

**SUMMARY OF RESEARCH FINDINGS AND
CONSUMER BEHAVIOR IMPLICATIONS:**

**Antecedents of Attributions:
Differences between Older and Younger Individuals**

| Antecedent of Attributions | Central Research Findings | Consumer Behavior Implications: Product Failure/ Product Harm Crises |
|--|---|--|
| Prior Beliefs <ul style="list-style-type: none"> • Nature of Schemas | Older individuals have better developed schemas for injury-causing situations due to their greater life experience. (Hart et al. 1997) | Older consumers might be more open minded to the complexities of the situation due to their greater life experience and may therefore assess less blame to the company if culpability is unclear. |
| Motivations <ul style="list-style-type: none"> • Desire for perceived control • Self-protection | The elderly are more likely to engage in biased information processing in support of these motivations (Heckhausen and Schulz 1995). | Elderly consumers will generate more defensive attributions than younger consumers in relation to a product harm crisis when the product harm crisis is personally threatening either because of the product type or the type of consumer affected by the crisis. |
| Information <ul style="list-style-type: none"> • Reliance on Prior Beliefs in Arriving at Attributions | The elderly rely more on stereotypes than their younger counterparts in arriving at attributions (Feild 1976; Gray and Ashmore, 1976). This is not necessarily the result of increased prejudice among older individuals; instead, it is likely to reflect limitations in the cognitive resources of the elderly (von Hippel et al. 2000) | On average, the elderly would be more likely to rely on extrinsic cues such as brand or country of origin in assessing the culpability of a company for a product failure/product harm crisis as opposed to processing information directly associated with a product harm crisis. |
| <ul style="list-style-type: none"> • Information | The elderly differ from their younger counterparts in cognitive | The tendency for the elderly to rely more heavily on extrinsic cues and |

| | | |
|---|--|---|
| <p>processing deficits</p> <ul style="list-style-type: none"> • Selective information processing | <p>performance as a result of reduced processing resources caused by the aging process (Craik 1983; Craik and Byrd 1982; Hasher and Zacks 1979; Zacks and Hasher 1988). These observed impairments in cognitive performance depend on:</p> <ol style="list-style-type: none"> 1) Time constraints on the information processing task – Time constraints contribute to impairments in elderly cognitive performance (Blanchard-Fields 1994; Chen and Blanchard-Fields 1997) 2) Time of Day - Impairments in elderly cognitive performance are more likely to occur in the afternoon/evening (Yoon 1997) 3) Benefits of experience – In some cases, the elderly might have superior knowledge structures, and they might be able to selectively process the most relevant information to improve their cognitive performance (Baltes 1993) | <p>prior beliefs such as stereotypes and schemas (in preference to information directly associated with a product harm crisis) will be more pronounced when:</p> <ol style="list-style-type: none"> a. Information is processed in the afternoon or evening b. There are time constraints for information processing c. The domain related to the product harm crisis is unfamiliar, such that prior experience is less useful in guiding information processing |
|---|--|---|

Attributional Dimensions of Locus and Controllability: Differences between Older and Younger Individuals

| Attributional Dimension | Central Research Findings | Consumer Behavior Implications: Product Failure/ Product Harm Crises |
|--------------------------------|---|---|
| Locus | When they are not under time constraints or cognitive load, older individuals are less prone to biased, overly dispositional attributions (i.e., the Fundamental Attribution Error) than their younger counterparts (Follett and Hess 2002; Blanchard-Fields, 1994) | When elderly consumers are not under time constraints or cognitive load and learn about the crisis via a self-paced medium like the newspaper, they are likely to make judgments that are more situational than younger consumers, and thus less likely to blame the company. However, to the extent that judgments are made under time pressure, under duress, or based on information from a more fast-paced medium, this tendency is likely to vanish or even be reversed. |
| Controllability | Increasing age is associated with an increasing belief in lack of controllability of negative characteristics and abilities (Heckhausen and Baltes 1991; Weiner and Graham 1989) | Older consumers are more likely to give the company the benefit of the doubt in a product harm crisis. They are less likely to infer that the company had control over events related to a product harm crisis and are therefore less likely to exhibit the emotions and behaviors associated with higher levels of controllability such as anger towards the company and a desire to hurt the firm's business. |

REFERENCES

- Abelson, Robert P. 1988. "Conviction." *American Psychologist* 43 (April): 267-275.
- Ash, Stephen B., Daniel F. Gardiner, and John A. Quelch. 1980. "Consumer Satisfaction and Dissatisfaction in the Elderly Market." *New Findings on Consumer Satisfaction and Complaining*: 86-96.
- Baltes, Paul B. 1993. "The Aging Mind: Potential and Limits." *The Gerontologist* 33(5): 580-594.
- Bearden, William O. and Mason, J. Barry. 1979. "Elderly Use of In-Store Information Sources and Dimensions of Product Satisfaction/Dissatisfaction." *Journal of Retailing* 55 (1): 79-91.
- Benet, Suzanne B., Robert E. Pitts, and Michael LaTour. 1993. "The Appropriateness of Fear Appeal Use for Health Care Marketing to the Elderly: Is it ok to Scare Granny." *Journal of Business Ethics* 12 (1): 45-55.
- Blanchard-Fields, Fredda. 1994. "Age Differences in Causal Attributions from an Adult Developmental Perspective." *Journal of Gerontology* 49 (March): 43-51.
- Blumberg, Stephen J. and David H. Silvera. 1998. "Attributional Complexity and Cognitive Development: A Look at the Motivational and Cognitive Requirements for Attribution." *Social Cognition* 16 (Summer): 253-266.
- Burger, Jerry M. 1981. "Motivational Biases in the Attribution of Responsibility for an Accident. A Meta-Analysis of the Defensive-Attribution Hypothesis." *Psychological Bulletin* 90 (November): 496-512.
- Chen, Yiwei and Fredda Blanchard-Fields. 1997. "Age Differences in Stages of Attributional Processing." *Psychology and Aging* 12 (December): 694-703.
- Choi, Incheol, Richard E. Nisbett, and Ara Norenzayan. 1999. "Causal Attribution across Cultures: Variation and Universality." *Psychological Bulletin* 125 (January): 47-63.
- Cole, Catherine A. and Michael J. Houston. 1987. "Encoding and Media Effects on Consumer Learning Deficiencies in the Elderly." *Journal of Marketing Research* 24 (February): 55-63.
- Craik, Fergus I. 1983. "On the Transfer of Information from Temporary to Permanent Storage." *Philosophical Transactions of the Royal Society of London Ser. B* 302: 341-359.
- Craik, Fergus I. and Mark Byrd. 1982. "Aging and Cognitive Deficits: The Role of Attentional Resources." In *Aging and Cognitive Processes: Advances in the Study of Communication and Affect*. Eds. Fergus I. Craik and Sandra Trehub. New York: Plenum, 191-211.
- Dawar, Niraj and Madan M. Pillutla. 2000. "Impact of Product-Harm Crises on Brand Equity: The Moderating Role of Consumer Expectations." *Journal of Marketing Research* 37 (May): 215-226.
- Davidson, Wallace N. and Dan L. Worrell. 1992. "Research Notes and Communications: The Effect of Product Recall Announcements on Shareholder Wealth." *Strategic Management Journal* 3 (6): 467-473.

- Fazio, Russell H. 1995. "Attitudes as Object-Evaluation Associations: Determinants, Consequences, and Correlates of Attitude Accessibility." In *Attitude Strength: Antecedents and Consequences*. Eds. Richard E. Petty and Jon A. Krosnick. Hillsdale, NJ: Erlbaum.
- Feild, Hubert S. 1976. "Rape Trials and Jurors' Decisions: A Psychological Analysis of the Effects of Victim, Defendant, and Case Characteristics." *Law and Human Behavior* 3 (4): 261-284.
- Finucane, Melissa L., Paul Slovic, Judith H. Hibbard, Ellen Peters, C.K. Mertz, and Donald G. MacGregor. 2002. "Aging and Decision-Making Competence: An Analysis of Comprehension and Consistency Skills in Older Versus Younger Adults Considering Health-Plan Options." *Journal of Behavioral Decision Making* 15 (April): 141-164.
- Fiske, Susan T. and Shelley E. Taylor. 1991. *Social Cognition* (2nd ed.). New York: McGraw-Hill.
- Folkes, Valerie S. 1984. "Consumer Reactions to Product Failure: An Attributional Approach." *Journal of Consumer Research* 10 (March): 398-409.
- Folkes, Valerie S. 1988. "Recent Attribution Research in Consumer Behavior: A Review and New Directions." *Journal of Consumer Research* 14 (March): 548-565.
- Folkes, Valerie, Susan Koletsky, and John L. Graham. 1987. "A Field Study of Causal Inferences and Consumer Reaction: The View from the Airport." *Journal of Consumer Research* 13 (March): 534-539.
- Follett, Katherine J. and Thomas M. Hess. 2002. "Aging, Cognitive Complexity, and the Fundamental Attribution Effort". *Journal of Gerontology: Series B: Psychological Sciences & Social Sciences* 57B (July): 312-323.
- Gray, David B. and Richard D. Ashmore. 1976. "Biasing Influences of Defendants' Characteristics on Simulated Sentencing." *Psychological Reports* 38 (June): 727-738.
- Gregoire, Yani. 2003. "The Impact of Aging on Consumer Responses: What do we Know?" *Advances in Consumer Research* 30.
- Gross, Sharon R., Rolf Holtz, and Norman Miller. 1995. "Attitude Certainty." *Attitude Strength: Antecedents and Consequences*. Eds. Richard E. Petty and Jon A. Krosnick. Hillsdale, NJ: Erlbaum, 215-246.
- Hart, Allen J., David L. Evans, Roselle S. Wissler, Jason W. Feehan, and Michael J. Sakes. 1997. "Injuries, Prior Beliefs, and Damage Awards." *Behavioral Sciences and the Law* 15 (Winter): 63-82.
- Hasher, Lynn and Rose T. Zacks. 1979. "Automatic and Effortful Processes in Memory." *Journal of Experimental Psychology: General* 108 (September): 356-388.

- Heckhausen, Jutta and Paul B. Baltes. 1991. "Perceived Controllability of Expected Psychological Change Across Adulthood and Old Age." *Journal of Gerontology: Psychological Sciences* 46 (July): 165-173.
- Heckhausen, Jutta and Joachim Krueger. 1993. "Developmental Expectations for the Self and "Most Other People:" Age-Grading in Three Functions of Social Comparison." *Developmental Psychology* 29 (May): 539-548.
- Heckhausen, Jutta and Richard Schultz. 1995. "A Life-Span Theory of Control." *Psychological Review* 102 (April): 284-304.
- Hess, Thomas M. 1994. "Social Cognition in Adulthood: Aging-Related Changes in Knowledge and Processing Mechanisms." *Developmental Review* 14 (December): 373-412.
- Holland, Rob W., Bas Verplanken, and Ad van Knippenberg. 2003. "From Repetition to Conviction: Attitude Accessibility as a Determinant of Attitude Certainty." *Journal of Experimental Psychology* 39 (November): 594-601.
- John, Deborah R. and Catherine A. Cole. 1986. "Age Differences in Information Processing: Understanding Deficits in Young and Elderly Consumers." *Journal of Consumer Research* 13 (December): 297-315.
- Johnson, Mitzi M. 1990. "Age Differences in Decision Making: A Process Methodology for Examining Strategic Information Processing." *Journal of Gerontology: Psychological Sciences* 45 (March): 75-78.
- Klein, Jill and Niraj Dawar. 2004. "Corporate Social Responsibility and Consumers' Attributions and Brand Evaluations in a Product-Harm Crisis." *International Journal of Research in Marketing* 21: 203-217.
- Laufer, Daniel. 2002. "Product Crises and Consumers' Assessment of Blame: Is there an Impact of Country of Origin?" Dissertation. University of Texas, Austin.
- Laufer, Daniel. 2002. "Are Antecedents of Consumer Dissatisfaction and Consumer Attributions for Product Failures Universal?" *Advances in Consumer Research* 29.
- Laufer, Daniel and Kate Gillespie. 2004. "Who's to Blame? Differences in Consumer Attributions of Blame between Men and Women: The Role of Perceived Vulnerability and Empathic Concern." *Psychology and Marketing* 21 (February): 209-222.
- MacInnis, Deborah J., Christine Moorman, and Bernard J. Jaworski. 1991. "Enhancing and Measuring Consumers' Motivation, Opportunity, and Ability to Process Brand Information from Ads." *Journal of Marketing* 55 (October): 32-53.
- Moschis, George, Carolyn Curasi, and Danny Bellenger. 2004. "Patronage Motives of Mature Consumers in the Selection of Food and Grocery Stores." *Journal of Consumer Marketing* 21 (2), 123-133.

- Moschis, George. 2003. "Marketing to Older Adults: An Updated Overview of Present Knowledge and Practice." *Journal of Consumer Marketing* 20 (6): 516-525.
- Oliver, Richard. 1997. *Satisfaction: A behavioral perspective on the consumer*. New York: McGraw-Hill.
- Park, Denise C. 1999. "Aging and the Controlled and Automatic Processing of Medical Information and Medical Intentions.: In *Processing of Medical Information in Aging Patients*. Eds. Denise C. Park, Roger W. Morrell, and Kim Shifren. Mahwah, NJ: Erlbaum, 3-22.
- Pyszczynski, Tom and Jeff Greenberg. 1987. "Toward an Integration of Cognitive and Motivational Perspectives on Social Inference: A Biased Hypothesis-Testing Model." In *Advances in Experimental Social Psychology*. Ed. Leonard Berkowitz. New York: Academic Press. 297-340.
- Robbennolt, Jennifer K. 2000. "Outcome Severity and Judgments of Responsibility: A Meta-Analytic Review." *Journal of Applied Psychology* 30 (December): 2575-2609.
- Salthouse, Timothy A. 1991. *Theoretical perspectives on cognitive aging*. Hillsdale, NJ: Erlbaum.
- Salthouse, Timothy A. 1996. "The Processing-Speed Theory of Adult Age Differences in Cognition." *Psychological Review* 103 (July): 403-428.
- Salthouse, Timothy A. and Renee L. Babcock. 1991. "Decomposing Adult Age Differences in Working Memory." *Developmental Psychology* 27 (September): 763-776.
- Schewe, Charles D. and Geoffrey Meredith. 2004. "Segmenting Global Markets by Generational Cohorts: Determining Motivations by Age." *Journal of Consumer Behavior* 4 (October): 51-63.
- Schaie, K. Warner and Christopher Herzog. 1983. "Fourteen-Year Cohort-Sequential Analyses of Adult Intellectual Development." *Developmental Psychology* 19 (July): 531-543.
- Schneider, Edward L. and John W. Rowe. 1991. *Handbook of the Biology of Aging* (3rd edition). San Diego, CA: Academic Press.
- Shaver, Kelly G. 1970. "Defensive Attribution: Effects on Severity and Relevance on the Responsibility Assigned for an Accident." *Journal of Personality and Social Psychology*
- Silvera, David H. and Daniel Laufer. 2005. "Recent Developments in Attribution Research and their Implications for Consumer Judgments and Behavior." In *Applying Social Cognition to Consumer-Focused Strategy*. Eds. Frank R. Kardes, Paul M. Herr, and Jacques Nantel. Mahwah, NJ: Erlbaum (in press).
- Siomkos, George J. and Gary Kurzbard. 1994. "The Hidden Crisis in Product-Harm Crisis Management." *European Journal of Marketing* 28: 30-41.
- Siomkos, George J. and Petros Malliaris. 1992. "Consumer Response to Company Communications During a Product-Harm Crisis." *Journal of Applied Business Research* 8: 59-65.

- Smith, Vicki L. 1991. "Prototypes in the Courtroom: Lay Representations of Legal Concepts." *Journal of Personality and Social Psychology* 61 (December): 857-872.
- Su, Wanru and Michael J. Tippins. 1998. "Consumer Attributions of Product Failure to Channel Members and Self: The Impact of Situational Cues. In *Advances in Consumer Research*. Ed. T.K. Srull. Provo, UT: Association for Consumer Research, 139-145.
- Srivastava, Rajendra K., Tasadduq A. Shervani, and Liam Fahey. 1998. "Market-Based Assets and Shareholder Value: a Framework for Analysis." *Journal of Marketing* 62 (January): 2-18.
- Thompson, Megan M., Mark P. Zanna, and Dale W. Griffin. 1995. "Let's Not be Indifferent about (Attitudinal) Ambivalence." In *Attitude Strength: Antecedents and Consequences*. Eds. Richard E. Petty and Jon A. Krosnick. Hillsdale, NJ: Erlbaum.
- U.S. Census Bureau 2000. "Projections of the Population by Age, Sex, Race, and Hispanic Origin for the United States: 1999 to 2100." *National population projections* [Online] 2000 Available: http://www.census.gov/population/projections/nation/detail/d1999_00.pdf
- Von Hippel, William, Lisa A. Silver, and Molly E. Lynch. 2000. "Stereotyping Against your Will: The Role of Inhibitory Ability in Stereotyping and Prejudice Among the Elderly." *Personality and Social Psychology Bulletin* 26 (May): 523-532.
- Walster, Elaine. 1966. "Assignment of Responsibility for an Accident." *Journal of Personality and Social Psychology* 3 (1): 73-79.
- Weiner, Bernard. 1980. *Human Motivation*. New York: Holt.
- Weiner, Bernard. 2000. "Attributional Thoughts about Consumer Behavior." *Journal of Consumer Research* 27 (December): 382-387.
- Weiner, Bernard and Sandra Graham. 1989. "Understanding the Motivational Role of Affect: Life-Span Research from an Attributional Perspective." *Cognition and Emotion* 3 (December): 401-419.
- Willis, Sherry L. 1991. "Cognition and Everyday Competence." *Annual Review of Gerontology and Geriatrics* 11: 80-109.
- Yoon, Carolyn. 1997. "Age Differences in Consumers' Processing Strategies: An Investigation of Moderating Influences." *Journal of Consumer Research* 24 (December): 329-342.
- Zacks, Rose T. and Lynn Hasher. 1988. "Capacity Theory and the Processing of Inferences." In *Language, Memory and Aging*. Eds. Leah Light and Deborah M. Burke. New York: Cambridge University Press, 154-170.