

SYMBOLIC VISUALS IN ADVERTISING: THE ROLE OF RELEVANCE

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Relevance has been applied to various conditions in the marketing literature but no single definition has been developed. A single clear definition will be helpful to researchers investigating relevance in the marketing and consumer behavior fields. Confusion also exists in the literature regarding to what extent a symbolic visual in an advertisement is relevant. Many researchers are also calling for empirical evidence of a linkage between relevance and response through a theoretical measure of relevance.

The central theory used in this dissertation is Sperber and Wilson's (1995) theory of relevance (TOR). TOR can help researchers and marketing managers by explaining how consumers may interpret visuals in advertising. TOR explains why some visuals thought to be unconnected with the product become relevant in advertising. This study makes the assertion that TOR has been underutilized and even ignored by some researchers in past marketing literature. Thus, TOR is used to provide greater explanatory power of consumers' interpretation and response to advertising visuals than what is currently realized by researchers and marketing managers. A reliable measure of relevance was developed using TOR as a foundation. Experiments were conducted to empirically test TOR and support was found for most aspects of the theory.

This dissertation makes several contributions to the consumer behavior literature. These contributions include: 1) clarifying the definition of relevance in advertising, 2) developing a tentative measure of relevance, 3) providing an explanation of how non-

relevant visuals produce effects expected for relevant visuals as occurred in experiments conducted by Mitchell and Olson (1981) and Miniard, Bhatla, Lord, Dickson and Unnava (1991), 4) showing how relevance of symbolic visuals in advertisements relates to specific consumer responses, and 5) offering suggestions for how the theory of relevance can be used by researchers and marketing managers to gain a better understanding of consumers' interpretation of advertising visuals.

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## CHAPTER I

### INTRODUCTION

What does a predator fish have in common with men's cologne? When combined without any additional explanation, the fish and cologne may not hold anything in common for most people but when combined in an advertisement a connection may be tenable.

An observation of print advertisements demonstrates that advertisers combine a wide variety of visuals with various products. For example, print advertisements have paired an alligator with hand lotion, a lion with a high-speed copy machine, and a lizard with an energy drink. Other examples pair a baby with baby food, a large green person with vegetables, and an athlete with athletic shoes.

Clearly, the world of print advertisements is rich with visuals that permeate the field in almost every way imaginable (Scott 1994). Such visuals sell products by providing the buyer with a structure with which to understand the message in the advertisement (Williamson 1978). Advertisements utilizing symbolic visuals communicate more complex meanings concerning the advertised product (Baudrillard 1988; Featherstone 1991; Leiss, Klein, and Jhally 1990; Martineau 1957; McCracken 1987, 1990).

Conveying complex meanings through visuals in an advertisement is facilitated by humans' ability to determine symbolic meaning for objects (Blumer 1969). In fact, it is safe to assume that most visuals used in print advertising carry multiple meanings and to varying extents are symbolic in nature (Scott 1994). A symbolic visual, is a picture that

contains both an intrinsic meaning and an implied meaning (Levy 1959). Symbolic visuals denote things other than objects in empirical reality (Scott 1994). For example, a fish paired with cologne in an advertisement would hold intrinsic meaning as a fish but could also imply the act of being on the prowl for a mate or a partner.

It is necessary for advertisers to determine how symbolic visuals obtain the aforementioned meanings so they are better able to develop effective advertisements. The theory of symbolic interactionism can be used to comprehend how symbolic visuals used in advertising acquire meaning (Blumer 1969, Mead 1938). Symbolic interactionism is predicated on the idea that objects derive symbolic meaning from the social interaction people have with other individuals and organizations in society. These are social meanings that are formed in and through the defining activities of a society or culture. The meanings that are derived by any one individual are only possible through the process of interpretation (Blumer 1969). Spears, Mowen and Chakraborty (1996) say that this interpretation of advertising visuals occur through the culturally constituted world, composed of values, ideas, beliefs, and the inherent meanings for specific objects.

Symbolic visuals play a major role in advertising because one of the primary techniques employed by advertisers is to transfer symbolic meaning by associating a product or service with a symbolic representation of the product (Leigh and Gabel 1992). Since symbolic visuals appear to be an integral part of the planning and execution of many promotional strategies, marketing managers would benefit from greater understanding about what effects occur during the use of symbolic visuals.

Academic researchers have also been intrigued by the effects of pairing different kinds of symbolic visuals with products in advertisements. These research efforts include testing the impact of relevant and non-relevant visuals on consumer response (Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991), conceptualizing how consumers process advertising visuals (Scott 1994), the symbolic meaning conveyed by animals in advertisements (Spears Mowen and Chakraborty 1996), exploring the implications of visuals in advertisements (Phillips 1997), analysis of the symbolism of celebrity images (Stafford, Spears and Hsu 2003), and testing how consumers process indirect persuasion of visuals (McQuarrie and Phillips 2005). Researchers in this stream have often explored how to correctly pair symbolic visuals with products, consequently comparing the effects from relevant visuals to non-relevant visuals. Unmistakably, the importance of studying relevant symbolic visuals in the context of the advertisement has been recognized in the advertising and marketing literature.

Despite the considerable attention that researchers have devoted to relevant symbolic visuals, many questions remain. One such question is how symbolic visuals become relevant in the advertisement. Thus, while some studies have used various conceptualizations of relevance, no study has yet, comprehensively investigated and applied a theoretical aspect of relevance to symbolic visuals in advertising. This research addresses a need for understanding how relevance occurs through symbolic visuals in advertising. It explores the role of relevance in relation to symbolic visuals in advertising.

## Research Questions

The importance of relevant symbolic visuals as a communication mechanism in advertisements is established in practice as well as the marketing literature. From the perspective of marketing managers and researchers, it is critical to understand how a symbolic visual becomes relevant and how relevance influences consumer response to the advertisement. To address the determinants of symbolic relevance, this dissertation builds upon and extends previous work by posing three research questions:

- 1) How is relevance for symbolic visuals used in advertisements defined in the literature?
- 2) What role does relevance play in relation to consumer responses of symbolic visuals in advertisements?
- 3) To what extent does the theory of relevance account for consumers' interpretations of symbolic visuals in an advertisement?

## Research Goals

This dissertation has four main goals. The first goal is to clarify the definition of relevance. Second, this dissertation will seek to uncover why visuals used in advertisements that appear unrelated to the product produced some effects that were only expected for visuals related to the product. A third goal is to examine the relationship between relevance and specific consumer responses. A fourth goal is to apply a theory of relevance to consumers' interpretation of symbolic visuals in an advertisement. To achieve the fourth goal the theory of relevance will be compared to communication

related theories. Such comparison will help researchers gain a more comprehensive perspective on how countervailing symbolic visuals function in an advertisement.

### Managerial and Theoretical Contribution

This dissertation makes several contributions to the consumer behavior literature. These contributions include: 1) clarifying the definition of relevance in advertising, 2) developing a tentative measure of relevance, 3) providing an explanation of how non-relevant visuals produce effects expected for relevant visuals as occurred in experiments conducted by Mitchell and Olson (1981) and Miniard, Bhatla, Lord, Dickson and Unnava (1991), 4) showing how relevance of symbolic visuals in advertisements relates to specific consumer responses, and 5) offering suggestions for how the theory of relevance can be used by researchers and marketing managers to gain a better understanding of consumers' interpretation of advertising visuals. The following sections detail each of these contributions.

#### *Definition of Relevance and Scale Development*

Relevance has been applied to various conditions in the marketing literature. The term has been used to represent the appropriateness of the visual to the product as determined by consumers (Scott 1994) and to describe a condition when the visual and product share a high number of attributes (Miniard, Bhatla, Lord, Dickson and Unnava 1991). Mitchell and Olson (1981) used the term relevance to describe a situation when the visual portrays expected meaning of the product. Relevance has been used to portray a situation when the visual demonstrates expected attributes of the product (McQuarrie

and Mick 1992). Relevance has also been used to describe when visuals produce some effect on the viewer of the advertisement (Stafford, Spears and Hsu 2003).

Since the literature defines relevance in different ways, a single clear definition will be helpful to researchers investigating relevance in the marketing and consumer behavior fields. A single universally documented definition is not found in the past or current literature. Without a clear definition, researchers will face difficulties attempting to operationalize the concept of relevance. This study will attempt to derive a theoretically meaningful definition of relevance as a construct in the area of advertising. Using the theoretically derived definition of relevance, an initial measure of the construct will be developed and tested. Miniard Bhatla, Lord, Dickson and Unnava (1991), Phillips (1997) and McQuarrie and Mick (1992) have measured relevance only as a dichotomous variable. Mitchell and Olson (1981) simply interpreted whether or not specific visuals are relevant. It appears that several elements included in Sperber and Wilson's (1995) theory of relevance (to be detailed in Chapter II) is typically not addressed in the literature. As a first step, a reliable tentative measure of relevance will undoubtedly benefit researchers in the marketing and advertising domain.

### *Relevant Symbolic Visuals*

Confusion exists in the literature regarding to what extent a symbolic visual in an advertisement is relevant. This lack of convergence regarding relevance has led Mitchell and Olson (1981) and Miniard, Bhatla, Lord, Dickson and Unnava (1991) to call for research addressing how consumers convert seemingly non-relevant visual information into semantic beliefs about attributes of the advertised product. Others such as Scott

(1994) argue that consumers process visuals in advertisements cognitively so that relevance may occur when the visual is unrelated to the product outside of the advertisement setting. Scott (1994) did not test the cognitive proposition, leaving it to future research. To investigate Scott's (1994) explanation, this dissertation will conduct experiments that closely follow Mitchell and Olson (1981) and Miniard Bhatla, Lord, Dickson and Unnava (1991) using a measure of relevance developed in this dissertation. This dissertation will offer suggestions for why visuals unrelated to the product may be relevant inside the advertisement.

#### *The Relationship between Relevance and Response*

Consumers may find a particular advertisement to be relevant, but marketing managers and researchers are also interested in what reactions arise from this relevance. Mitchell and Olson (1981) used the Theory of Reasoned Action (TRA) (Fishbein and Azjen 1975) to offer suggestions for how consumers may respond to relevant and non-relevant visuals in advertising. The TRA model proposes that behavioral intention is affected directly by subjective norms and attitudes. Social influences on behavioral intentions are thought to operate principally through an overall measure of subjective norms. Subjective norms, in turn, are presumed to stem from the combination of normative beliefs. Consumers possess normative beliefs about various attributes of any particular product and the combination of these beliefs form the overall attitude a person has for a product. This overall attitude is presumed to have a causal influence on behavior intentions, such as a consumer's intention to purchase (Fishbein and Azjen 1975). Mitchell and Olson (1981) hypothesized that a visual related to a product in an

advertisement would influence respondents' beliefs about product attributes and visuals unrelated to the product would have little or no impact on those same beliefs. They found visuals related to the product significantly raised belief levels about product attributes. Unexpectedly, they also found that respondent belief levels of some product attributes rose when a visual unrelated to a product were combined in an advertisement. Finally, consistent with TRA, they found belief levels about product attributes were significantly correlated to responses such as attitude toward brand and purchase intention. Thus, Mitchell and Olson (1981) measured consumer responses to relevant visuals in an advertisement in the form of belief intentions about product attributes, attitude toward the brand, attitude toward the advertisement, and purchase intentions.

Measuring attitude toward the brand, attitude toward the advertisement, and purchase intentions are common in the consumer behavior literature (Wang 2006). Researchers observing the effects of relevant and non relevant visuals in advertising have typically used these measures as well (i.e. Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991; McQuarrie and Mick 1992; Wang 2006).

The problem is not that researchers are confused about what responses should be measured; it is whether or not these responses are linked with a true measure of relevance. While the linkage of relevance and response is theoretically sound (Mitchell and Olson 1981; Wang 2006), this dissertation seeks to provide empirical evidence of this linkage through a theoretical measure of relevance. This contribution addresses a call by many researchers (Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava

1991; Phillips 1997; McQuarrie and Phillips 2005) to examine relevant visuals in advertisements and their link to specific consumer responses.

### *Theory of Relevance*

The central theory used in this dissertation is Sperber and Wilson's (1995) Theory of Relevance. The Theory of Relevance can help researchers and marketing managers by explaining how consumers may interpret visuals in advertising. The Theory of Relevance explains why some visuals thought to be unconnected with the product become relevant in advertising. This study makes the assertion that the Theory of Relevance has been underutilized and even ignored by some researchers in past marketing literature. Thus, the Theory of Relevance can be used to provide greater explanatory power of consumers' interpretation and response to advertising visuals than what is currently realized by researchers and marketing managers.

### Overview of the Dissertation

This dissertation will be organized in the following manner: Chapter I, the current chapter, provides an introduction to this study by outlining the primary research questions, objectives of the dissertation, and managerial and academic contributions. Chapter II will be a review of the literature that addresses the relevance of symbolic visuals, theoretical foundations will be presented, a development and overview of the conceptual model and hypotheses will be developed. Study I, a scale development of relevance, will be outlined in Chapter III. Chapter IV will provide a detailed description of Study II as well as the results of the experiment. Chapter V will provide a discussion

of the dissertation's theoretical and practical implications, limitations of the study, and suggestions for future research.

## CHAPTER II

### LITERATURE REVIEW, MODEL OVERVIEW, AND HYPOTHESES

#### DEVELOPMENT

##### Chapter II Overview

The domain for this research is visuals combined with a product in an advertisement. The dissertation explores how visuals may provide information about the product in the advertisement setting. The first step of this study is to explore the marketing literature to gain an understanding of visuals used in advertisements. Some of the research explains how advertising visuals derive meanings and how these meanings are communicated. Once an adequate understanding of visuals used in advertisements is developed, then critical pursuit of what makes them relevant can take place.

Secondly, this study explores the existing literature for definitions and how relevance was used in past studies. This study will also determine if there were any inconsistencies. Third, this chapter will outline Sperber and Wilson's (1995) Theory of Relevance. The Theory of Relevance may clarify the definition of relevance and may explain why visuals and products that seem to have no connection are suddenly connected when paired in an advertisement. A model of relevance is developed to visually represent relevance. This model provides suggestions for how a visual and product together in an advertisement produce thoughts in a person's mind. Finally, hypotheses will be developed from the links shown in the model.

## Literature Review

### *Symbolic Visuals*

Symbolic visuals are considered to fall under the larger umbrella and topic of study called semiotics whose roots can be followed back to the Greek philosophers such as Hippocrates, Plato, Aristotle, Poinot, Locke, Leibiniz, and Vico (Mick 1986). Semiotics was considered by these philosophers to be the identification of signs as conveyers of messages about physical and mental states. Semiotics was more formally developed by Swiss linguist Ferdinand de Saussure and the U.S. philosopher Charles Sanders Peirce (Mick 1986).

Saussure (1966) and Peirce (1982) broadly defined semiotics as the analysis of the structures of meaning-producing events, in both verbal and nonverbal forms. The scope of semiotics and its subject matter includes the exchange of any messages and of the systems of signs which underlie them (Sebeok 1976). The sign is the fundamental concept of semiotics (Sebeok 1976). The study of semiotics typically takes on two general questions: 1) what is the nature of meaning? and 2) how does our reality—words, gestures, myths, products/services, theories—acquire meaning? (Ransdell 1977). Consequently, researchers in the field of semiotics have investigated signs used in communication for theories that facilitate sign production and interpretive responses (Mick 1986).

Peirce (1982) provided a framework for understanding signs that has been adopted by researchers (Mick 1992; Zakia and Nadin 1987) for use in the marketing and advertising disciplines. In his writings, Peirce developed the Triadic Semiosis Model to

define the process of communication. The Triadic Semiosis Model shows the relationship between a sign, the object it represents, and the person who interprets what the sign means. More recently, Alden, Steenkamp, and Batra (1999) have employed semiotics in their study of the global consumer culture.

A sign is defined as something that stands for something else (Mick 1986). It may be understood as a discrete unit of meaning which may include words, images, gestures, scents, tastes, textures, and sounds. A sign can represent all of the ways in which information can be communicated as a message sent by a sender and received by a receiver (Stewart 1966). In most situations the sign is connected to an object or idea that it represents. The entity or idea the sign represents is decoded by the person who views and interprets the sign. All three concepts, the sign, the object it represents, and the interpreter, are connected in a specific situation so communication can take place.

The Triadic Semiosis Model was essentially Peirce's (1982) theory of signs. He utilized a taxonomy that consisted of only three categories of signs—icons, indexes, and symbols. Peirce's (1982) definitions of these three categories are as follows:

*Icon* – a sign that denotes its objects by virtue of a quality or features that it shares with the object itself. The iconic sign is perceived as being similar to or imitating the object to which it refers. An example of an icon would be a curved arrow on a road sign indicating a curve in the road ahead. It is clear that while the curved arrow on the sign does not exactly match the curve in the road it shares the character or aspect of the road ahead.

*Index* – a sign that denotes objects by virtue of an existential connection that it has for the sign itself. An indexical sign essentially shows a connection or relationship with the object. The indexical sign is directly connected in some way, either physically or causally, to the object itself. An example of an index is smoke coming from a building, possibly representing fire. Thus smoke is an indexical sign that represents fire. Hence, an index refers to the object because it is actually affected or modified by it, and may stand as a trace of the existence of the object.

*Symbol* – a sign that represents an object because it is intended or interpreted by an individual to represent the object. A symbolic sign does not necessarily resemble the object signified but meaning given to the sign is developed by a particular culture. The signifying relationship between symbol and meaning must be learned by the sender and receiver of the message. People living in the same culture, because of common experiences often derive common meanings for a particular symbol. An example of symbolic sign is a cougar seen in an advertisement with an automobile. The symbolic sign of the cougar could mean speed, ferociousness, or femininity depending upon the interpretation of the receiver. A symbol thus denotes meaning, primarily, by virtue of the person who interprets it. The symbol is defined by a more or less systematic set of meanings that are generally held by people of a particular culture. In communication, these common meanings held by a society influence the receiver's interpretation to hold similar meanings implied by the sender.

### *Symbolic Interactionism and Meaning*

A relationship of a symbol with its cultural meaning is a concept developed in a theory known as symbolic interactionism. Symbolic interactionism is generally thought as originating in the early writings of sociologist George Herbert Mead (1934). Other sociologists such as Herbert Blumer (1969), the sociologist who actually coined the term symbolic interactionism, did much to further this important theory. Much of today's symbolic interaction theory is still based primarily on the works of Mead and Blumer.

Mead (1934, 1938) provided the foundation for symbolic interactionism and proposed that the individual assigns meaning to objects, people, and self. According to Mead, the meanings assigned to objects may change in relation to the role the object or a person plays, therefore different meanings may arise in different situations. He developed this argument by defining several important roles of people in society. The roles articulated by Mead are the *I*, *generalized other*, and the *me*. Each of these roles contributes to meaning developed for objects in society. Mead (1938) defines the *I* as how an individual responds to groups in society, other individuals, and objects. The *I* is a personal experience. For example, suppose a new advertisement gains notoriety. An individual may read information about it, their friends may give opinions of it, but the person may not make a complete assessment of the advertisement until they actually see and experience it. This personal experience provides meaning to the person about the advertisement. The *I* is this personal experience and it provides some meaning for objects.

Mead (1938) describes the *generalized other* as an organized set of attitudes, beliefs, and meanings collectively developed by society. An individual learns these meanings for objects simply by participating in society. Using the advertising example, an individual learns through published critiques and input from friends whether the advertisement is good or bad, acceptable or not acceptable, humorous or not humorous, etc. This information from society is another input into the construction of meaning for objects.

Finally, Mead describes the *me* as a reaction to meanings derived directly from knowing what meaning society places on objects. In other words, it is a meaning for an object that an individual feels that people in society expects them to have. Again using the advertisement example, an individual may not make a complete assessment until he or she interprets what the advertiser intended to say. In other words, what was the expected meaning from the advertisement? This expected meaning also provides individuals with information about the meaning they have for objects.

Mead's (1934) foundation of symbolic interaction theory uses this framework of the *I*, *generalized other*, and the *me*, to focus on the process by which individuals understand and interpret their world. It assumes that people interpret the actions of others rather than simply reacting to them. The response elicited by this individual is a function of the meaning attached to such actions, which is, in turn mediated largely by symbols (Blumer 1962).

Blumer (1969) uses Mead's work as a foundation for the formalization of symbolic interactionism. He says that symbolic interactionism is based on the following three premises:

*Premise #1:* Human beings act toward objects on the basis of meanings that the things have for them.

*Premise #2:* The meaning of such things is derived from, or arises out of, the social interaction that one has with one's fellows.

*Premise #3:* These meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things they encounter.

Symbolic interactionism posits that meaning for objects is derived from the meaning given to it by society itself, the meaning given to it by an individual's experience of it, and the meaning that an object is expected to possess. When a visual is presented in an advertisement, an individual must first interpret the visual as well as the advertisement as a whole to understand the message. When confronted with a visual they must recall what values, beliefs, and meanings are attached to the visual by the culture (Blumer 1969). The individual then determines what meanings society expects the visual to possess. Finally, the individual will access his or her personal experiences with the visual object. These experiences and thoughts combine to form the interpretation and ultimately the understanding of the visual leading to comprehension of the advertisement as a whole.

### *Symbolic Visuals in Advertising*

A definition of symbolic visuals is appropriate before the discussion of symbolic visuals in advertising. Much of the literature (i.e. Peracchio and Levy 2005; Zakia and Nadin 1987; Stewart 1966; Sirgy 1982; Mick 1986; Leigh and Gabel 1992; Durgee and Stuart 1987) has closely followed Levy's (1959) definition of symbolic visual used in advertising. Levy (1959) defines a symbolic visual as a picture that is understood to mean not only itself but also some other ideas or feelings. Levy's definition provides the basis for elaboration of other definitions such as: "an advertising visual meant to convey extra meaning that they would not ordinarily have when standing alone," (McQuarrie and Mick 1992) and "visuals that carry meaningful variation; visual objects that denote things other than objects in empirical reality" (Scott 1994). Scott (1994, p. 264) provides further explanation:

Let me qualify what I mean by "symbol" here. On the one hand, I am proposing that visuals are symbolic on the basis of the fact that they are conventional rather than natural. But I am also proposing that they work in a highly complex manner that transcends merely pointing to objects. Further, this is a dynamic system of symbols, one that arises out of social interaction and thus, is capable of subtle differentiation and modification rather than of merely a one-to-one correspondence with an object (or a signified). ...visuals are a social, rather than logical, code and an elaborated, rather than restricted system. Therefore, we would not expect exact, concrete correspondences of meaning but rather provisional, contextually situated meanings that are highly sensitive to differentiation and relationships.

Scott (1994) further articulates that most visuals used in advertising are symbolic in nature. Thus, a symbolic visual in advertising is deliberately employed to carry one or more meanings that not only denote the visual itself but other concepts, ideas or feelings.

The meanings of these ideas or feelings may change from individual to individual and from situation to situation.

Advertising agencies have attempted to exploit meanings given to symbolic visuals for many years by judiciously inserting these visuals into advertisements (Hirschman, Scott, and Wells 1998). The importance of advertising visuals, however, does not lie in the fact that they are used frequently by firms who wish to create successful advertisements, but in how these visuals add value to a brand or product. The literature implies that visuals add value through the process of meaning transfer (McCracken 1986, 1989). The meaning transfer model posits that symbolic visuals develop meanings through a socialization process such as symbolic interactionism. When visuals are combined with a product in an advertisement, the meaning that has been developed around a visual will transfer to a brand, or product (Erdogan and Baker 2000). Consumers in turn purchase the product in hopes to claim some of these transferred meanings communicated in the advertisement for their own lives (McCracken 1989; Leigh and Gabel 1992).

#### *Symbolic Visuals Conclusion*

Objects acquire symbolic meaning from society. As time passes, a culture will develop symbolic meanings for these objects (Spears, Mowen and Chakraborty, 1996). Individuals learn these meanings in a number of ways. They gain information about objects in society by first observing how people react to these objects. For example, a snake in US society is seen by many people as a representation of evil or deception (Leigh and Gabel 1992; Spears, Mowen and Chakraborty, 1996). A person learns that

many people in a culture hold similar feelings for snakes. Once understood, people in society may expect others to hold the same meanings and reactions as well. An individual may enhance these known and expected meanings if they happened to be startled by a snake. Together, meanings developed by society, expected meanings, and individual experience formulate the sum total of meanings derived for objects by individuals.

Therefore when people see visuals of objects in an advertisement they are likely to draw on meanings they have learned to understand them (Blumer 1969). Advertising visuals may hold a variety of meanings for different individuals based on their cultural history. Advertisers attempt to influence consumers by taking advantage of the symbolic meaning of objects. They purposely pair a visual of an object with a product in hopes that the meaning held in society of the visual will transfer to the product in a positive way. Consumers may then purchase the product to obtain some of the transferred meaning through consumption.

#### Relevance in the Literature

The concept of relevance has come to mean many things making it difficult for researchers to clearly define. Writers have defined it from the point of view of philosophy, logic, semantics, pragmatics, as well as utility (Saracevic 1975). Researchers have used relevance in many different ways—contributing to the vagueness of the concept. Relevance has been examined in the spokesperson literature (Lynch and Schuler 1994; Stafford, Spears and Hsu 2003), the information retrieval and programming literature (Celuch and Slama 1993; Meadow 1985; Harter 1992), the

product decision-making literature (Lee 1995; Meyers-Levy and Tybout 1989), and the visual processing literature (Miniard, Bhatla, Lord, Dickson and Unnava 1991; Heckler and Childers 1992; Lee and Mason 1999).

Relevance has also been used in a wide variety of operationalizations in the marketing literature (Table 1). For example, relevancy has been examined in terms of fit between a visual and the main theme of an advertisement (Heckler and Childers 1992; Lee and Mason 1999), between the verbal and visual information in print advertisements (Houston, Childers and Heckler 1987), and between advertisements containing visual cues and advertisements that evoked personal schemas (Goodstein 1993). Relevancy has also been examined in terms of whether a visual cue conveys attributes that are pertinent to the advertised product (Miniard, Bhatla, Lord, Dickson and Unnava 1992; Sengupta, Goodstein and Boninger 1997).

The marketing literature categorically defines relevance in three different ways: subjective, objective and contextual. Subjective relevance is whether or not the objects under consideration are important to a particular individual (Schlinger 1979). Objective relevance is when objects under consideration have a close logical connection (Harter 1992). Contextual relevance is when objects under consideration are connected as a result of placing them together in a specific situation (Sperber and Wilson 1995).

Table 1 -Relevance Literature Review

Author(s) / Year	Definition of Relevance	How “relevance” was measured	Contribution
Wells, Leavitt, McConville 1971	The degree to which the commercial’s message is important to the viewer.	3 item scale	A reaction profile for TV Commercials consists of six factors: Humor, vigor, sensuousness, uniqueness, personal relevance, irritation
Lutz, Lutz 1977	The visual conveys some type of brand attribute	Dichotomous manipulation: interactive vs. non-interactive	The learning of pictures was superior to the learning of words in terms of recall
Schlinger 1979	The degree to which consumers feel a commercial has told them something important and interesting about the brand.	5 item scale	Development of a viewer response profile consisting of seven factors: entertainment, confusion, relevant news, brand reinforcement, empathy, familiarity, alienation
Mitchell, Olson 1981	Visual in ad portrays expected meaning for product	Dichotomous manipulation: relevant vs. irrelevant	Attitude toward ad mediated advertising effects on brand attitudes
Lastovicka 1983	The meaningfulness of the ad and its product with respect to the viewer’s need	6 item scale	Found modest support for the convergent and discriminant validity for a viewer response profile consisting of three factors: relevance, confusion, entertainment
Houston, Childers, Heckler 1987	Visuals that portray brand or ad copy attributes	Dichotomous manipulation: consistent vs discrepant	Recall increases when visual and copy convey discrepant information about product attributes when brand name and visual are linked.
Feldman, Lynch 1988	The personal involvement of the viewer	N/A (conceptual)	Theoretical development of the effects of belief, attitude, and behavior.
Unnuva, Burnkrant 1991	Pictures that exemplify product attributes	1 item scale	High imagery verbal information decreases the effect of visual information

Table 1, Continued - Relevance Literature Review

Author(s) / Year	Definition of Relevance	How “relevance” was measured	Contribution
Miniard, Bhatla, Lord, Dickson, Unnava 1991	Visuals that portray attributes of the product	Dichotomous manipulation: relevant vs. non-relevant	Impact of non-relevant pictures decline as involvement increases. Opposite effect for relevant pictures.
Heckler, Childers 1992	Material pertaining directly to the meaning of the theme	Dichotomous manipulation: relevant vs. irrelevant	Incongruity is made up of two dimensions: relevancy and expectancy
McQuarrie, Mick 1992	Visual portrays expected attributes of the product	Dichotomous manipulation: consistent vs. inconsistent	Resonance produces positive effects for: liking for ad, brand attitude, and recall.
Areni, Cox 1994	When visual is centrally processed	N/A (conceptual)	Expectancy, evaluation, and relevancy are important dimensions of visual-verbal incongruity.
Scott 1994	When consumers feel the visual is appropriate for product	N/A (conceptual)	Visuals are a conventional-based symbolic system that must be cognitively processed.
Phillips 1997	When information is implicitly communicated by the ad	N/A (qualitative research)	Consumers interpretations of rhetorical visuals reveal that images are complex and generally match advertiser’s intent.
Baker, Lutz 2000	Information communicated in the ad that the consumer finds to be diagnostic and easiest to use in making a brand choice.	Dichotomous manipulation: diagnostic vs non-diagnostic	Testing the relevance-accessibility model in a variety of motivational scenarios.
Ang, Low 2000	The equivalent of meaningfulness that an ad conveys to consumers.	2 item scale	Relevance was not critical in encouraging favorable responses when information in the ad is unexpected.

Table 1, Continued - Relevance Literature Review

Author(s) / Year	Definition of Relevance	How “relevance” was measured	Contribution
Meuhling, Stoltman, Grossbart 2001	The degree to which information in an ad is useful and/or meaningful.	10 item scale	Comparative advertisements create higher levels of elaboration and recall.
Stafford, Spears, Hsu 2003	When the visual image produces some effect on the consumer in the ad context.	Not explicitly measured.	Comparison of males vs females evaluation of celebrity endorsers in advertisements.
Lee, Ang 2003	The degree to which the picture contributes to the identification of the primary message communicated by the ad.	Dichotomous manipulation: relevant vs non-relevant	Multiple linkages of picture and brand name may create interference with brand recall.
Wang 2006	Information that helps shape a consumer’s choice goal.	Dichotomous manipulation: relevant vs non-relevant	Advertising engagement has an effect on recall, involvement, believability, and attitude toward ad.

*Subjective Relevance*

Studies that examine relevance under the subjective setting are concerned with how important the information presented in an advertisement is to an individual (i.e. Wells, Leavitt and McConville 1971; Schlinger 1979; Lastovicka 1983). It is the individual’s interest level of the information presented by the visuals, text, and overall

advertisement that define subjective relevance (Wells, Leavitt and McConville 1971; Petty, Cacioppo and Schumann 1983; Petty and Cacioppo 1981).

Wells, Leavitt and McConville (1971) developed a reaction profile for television commercials that consisted of six factors, one of which was *personal relevance*. This personal relevance factor apparently measured the degree to which the commercial's message is relevant to the viewer's present activities, interests, and needs. The three items that measured personal relevance were: *important to me*, *meaningful to me*, and *for me, worth remembering and valuable*.

Schlinger (1979) developed similar instrument to measure reactions or responses to advertisements. Schlinger (1979) developed seven dimensions to measure responses, one of which was *relevant news*. The relevant news dimension suggested the advertisement was relevant if the consumer feels the advertisement told them something important and interesting about the brand. Relevancy was not simple facts about the brand but rather information that was entertaining and consistent with the viewer's needs and interests. Some items were used to measure *relevant news* were: *the commercial told me about a new product I think I'd like to try*, *the commercial reminded me that I'm dissatisfied with what I'm using now* and *I'm looking for something better*.

The aforementioned viewer response profiles as well as others (e.g Lastovicka 1983) developed a concept of relevance as a personal interest of the individual viewer to the information presented in the advertisement. Other researchers continued to use subjective relevance to mean the personal involvement of the viewer (Feldman and

Lynch 1988) and the degree to which the information is useful (Meuhling, Stoltman and Grossbart 2001).

These definitions of relevance as a personal and subjective notion position it closely to the concept of involvement. Involvement is meant to convey the level of individual interest in a product or advertisement and has been defined as the perceived personal importance or interest attached to the acquisition, consumption, and disposition of a good, service, or idea (Mowen and Minor 2006; Celsi and Olson 1988). Many researchers have described involvement in terms of subjective relevance (Wells, Leavitt and McConville 1971; Petty, Cacioppo and Schumann 1983; Petty and Cacioppo 1981; Feldman and Lynch 1988). Petty and Cacioppo (1981) and Petty, Cacioppo and Schumann (1983) use the term *personal relevance* and *personally relevant* to describe and define the involvement of an individual with the message presented by an advertisement.

*Personal relevance* and *personally relevant* constructs are used in the development of the Elaboration Likelihood Model (ELM). According to the ELM, involvement of the consumer is a moderator that helps determine how consumers will process messages presented to them in an advertisement (Petty, Cacioppo and Schumann 1983). As the involvement level increases the consumer is more likely to carefully attend to messages about the focal product, thus taking the central processing route when viewing advertisements. As involvement level decreases the consumer is less likely to attend to the central message of an advertisement, thus taking the peripheral route when viewing advertisements. Thus, some researchers have used the tenets of ELM as a

definition for relevance. For example, Areni and Cox (1994) defined relevance when visuals are centrally processed, taking into account the level of involvement or personal relevance of the individual.

#### Summary of Subjective Relevance

Some marketing researchers have used a subjective form of relevance. Subjective relevance is when an object in an advertisement is important to the individual. Subjective relevance is similar to the individual involvement with an advertisement, visual, product or combination of them. Both concepts of subjective relevance and involvement attempt to describe the level of interest or importance placed on objects by the individual.

According to a subjective relevance, the more interest a person holds for an object the more relevant it is to them.

#### *Objective Relevance*

The second category of relevance that emerges from the literature is objective relevance. Harter (1992) described objective relevance as being on the topic. Thus, researchers often treat objective relevance as topical (i.e. Lutz and Lutz 1977; Miniard, Bhatla, Lord, Dickson and Unnava 1991; Heckler and Childers 1992). Researchers utilizing objective relevance assume a visual or advertisement is relevant only when it has an objective fit with the product or the personal schema of the consumer.

Lutz and Lutz (1977) used an objective conceptualization of relevance when investigating the role of picture type on brand name memory strength. In their experiment, they examined the differences between three advertising content conditions of interactive (relevant) pictures, non-interactive (non-relevant) pictures and verbal-only

copy. Interactive pictures conveyed some type of brand attribute and non-interactive pictures had no relationship to any brand attribute. They concluded that the learning of pictures was superior to the learning of words in terms of brand recall.

Mitchell and Olson (1981) consider relevance to be a logical fit of the advertising visual with the product. The visuals used to represent relevant and non-relevant manipulations were selected by the authors' intuition. Their intuition was any visual logically connected with some aspect of the product was deemed as relevant, and vice versa. Mitchell and Olson (1981) were not examining relevance per se, but exploring mediators of brand attitude. Their primary finding was that attitude toward advertisement did indeed mediate brand attitudes. Their study also unexpectedly suggested that subjects could convert visual information that was not directly related to the product (what they considered to be non-relevant) into meaningful semantic information about the product. They explained this anomaly as being possibly attributed to classical conditioning or maybe some of the advertisements used in the experiments had textual information that may have primed the subjects for the visual-only material.

In an attempt to better understand the effectiveness of relevant visual information and the potential moderating role of involvement on persuasion, Miniard, Bhatla, Lord, Dickson and Unnava (1991) examined the interaction between visual information and involvement. They viewed relevance as distinct from the subjective aspect of involvement. They allowed students to determine the visual's relevancy and non-relevancy with a specific product. Miniard, Bhatla, Lord, Dickson and Unnava (1991) defined relevance as when a picture shared attributes with the product. Those visuals that

shared few or no attributes were deemed to be non-relevant. They discovered that relevant (visuals that shared product attributes) pictures were effective at high levels of involvement, effectively transforming the pictures from mere peripheral cues to central information. The authors concluded that for high involvement conditions, irrelevant pictures are likely to be processed as peripheral cues, and relevant pictures are likely to be processed centrally.

Scott (1994) argues against the idea that visuals in advertisements are processed peripherally regardless of a person's involvement level. Instead, Scott (1994) asserts that advertising visuals are symbolic possessing varied and complex meanings. Because visuals possess these complex meanings, an individual must process and interpret them cognitively. As a result, relevant and non-relevant visuals should be processed centrally. Since visuals are processed centrally, advertisers select those visuals that are most appropriate for the product (Scott 1994; Burke 1969; Corbett 1965). Scott (1994) describes this as Rhetoric Theory which posits a message framed by an interested party is an attempt to influence an audience. Rhetoric Theory posits the sender crafts the message with the assumption of the audience's probable response and interpretation, using shared knowledge of various meanings, conventions, and shared experiences (Scott 1994). Rhetoric visuals selected for the advertisement are often manipulated to share a logical connection with the product, thus making the visuals relevant (Scott 1994).

Heckler and Childer (1992) attempted to show objective relevance as a component of congruency. The basic premise of their research was incongruency is a multidimensional concept, the components of which may produce countervailing effects

on memory. They draw on research in social cognition and information processing to develop a theoretical framework that posits two dimensions of incongruity: relevancy and expectancy. Relevancy is defined as material pertaining directly to the meaning of the theme of the advertisement (Goodman 1980). Expectancy is defined as the degree to which an item or piece of information fall into some predetermined pattern of structure evoked by the theme (Goodman 1980). Relevancy is also referred to later in the study as the visual being consistent with the product as well as the theme of the advertisement (Heckler and Childer 1992, p.477). Heckler and Childer (1992) found that relevant pictures were more easily recalled than in the expected-irrelevant condition, but, when an unexpected-irrelevant picture was presented, recall was enhanced. Visuals were selected as ranging from relevant (sharing attributes with the product) to irrelevant (sharing few or no product attributes).

#### Summary of Objective Relevance

The objective conceptualization of relevance appears to be the most common in the literature with many researchers using it in some form or another (i.e. Bower 1972; Paivio 1978; Houston, Childers and Heckler 1987; Unnuva and Bunkrant 1991; McQuarrie and Mick 1992). Objective relevance is when an object in an advertisement has a close logical connection to the product. This close logical connection is usually thought to mean the visual and product share many common attributes. According to researchers who use objective relevance, the more attributes a visual share with an object the more relevant it becomes.

### *Contextual Relevance*

The third type of relevance used in the literature is a contextual relevance. Studies that use contextual relevance hold that relevance arises from a context. A context is a circumstance or a setting in which the objects under consideration are placed (Harter 1992). It provides a framework of understanding. Thus, a visual and product placed together in an advertisement are connected because of the context, not because they hold personal importance for the viewer, nor because the visual and product share attributes. Thus, contextual relevance is a connection established between the visual and the product because they are placed together in an advertising context. In other words, the visual and product independently outside of the advertisement may be unconnected in any way but together are connected inside the context of the advertisement.

Phillips (1997) used a qualitative study to develop a new conceptualization that characterizes complex advertising images as figures of rhetoric from which consumers infer advertising messages. Phillips (1997) defines relevance when information presented by a visual and product is implied and not necessarily explicitly stated in the advertisement. Relevance, according to Phillips (1997), happens when a person viewing an advertisement can obtain an implied meaning from a connection of visual and product. She referred to implied meanings as implicatures. In the study, informants interpreted the meaning of six advertisements containing pictures. The interpretations indicated that shared strong implicatures as well as multiple weak implicatures were able to be drawn from images in the advertisements. Consumers in the study were generally able to draw

similar interpretations that were originally intended by the advertisers when they were created (Phillips 1997).

Baker and Lutz (2000) empirically explore a relevance-accessibility model of advertising effectiveness. Baker and Lutz (2000) base their definition of relevance on the diagnostic definition developed by Feldman and Lynch (1988). *Diagnostic* is the degree consumers believe the decision implied by the inputs of the advertisement alone would best help them make a brand choice. Baker and Lutz (2000), however, adapt this definition to mean that information is relevant if it meets a minimum level of diagnosticity depending on the involvement level of the individual. Relevance in this instance is when a visual provides useful information (diagnostic) about the product, thus helping the consumer with product evaluation. Hence, the relevance-accessibility model proposes that consumers are more likely to use information which meets a minimum threshold of diagnosticity and is the most accessible in making the brand choice. Baker and Lutz (2000) found as involvement declines, it is less likely that the information which most efficiently achieves the brand choice objectives is also the most relevant.

Stafford, Spears and Hsu (2003) applied the visual rhetoric model to explore celebrity gender images in magazine advertisements. This content analysis did not explore relevancy per se but defined relevance to help explain why advertisements with celebrities are effective. The authors defined relevance when the visual image in an advertisement produces some effect on the consumer in the advertising context.

## Summary of Contextual Relevance

Relatively few other authors have used a contextual relevance definition in their study of advertising visuals (i.e. Ang and Low 2000; Lee and Ang 2003; Stafford, Spears and Hsu 2006; Wang 2006) and fewer still attempt to test a theory of contextual relevance empirically. Contextual relevance is when a visual in an advertisement is connected to the product as a result of the context of the advertisement itself. This connection is independent of whether or not they are logically connected outside the advertisement. Contextual relevance is considered in this study to be the most effective representation of relevance.

## *Conclusion of Relevance in the Literature*

It is clear from the literature that relevance has been used in a variety of ways, from a simple concept (Mitchell and Olson 1981) to a complex theory (Phillips 1997; Stafford, Spears and Hsu 2003). The use of relevance in the literature, however, can be categorized into three broad categories of 1) subjective relevance 2) objective relevance, and 3) contextual relevance. Subjective relevance deals with whether objects under consideration are important to an individual personally. It does not explain how an individual with a low level of interest for a product could find an advertisement about that product to be relevant.

Objective relevance is when one or more objects under consideration have a close logical connection. The issue that object relevance fails to address is the context. Objects tested for relevance outside of an advertisement have been typically expected to remain relevant or irrelevant inside the context of the advertisement. Several studies have found

that relevance for particular objects change from outside the context of an advertisement to inside the context of an advertisement (Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991). This change is unexplained by objective relevance.

Contextual relevance is when a visual in an advertisement is connected to the product as a result of the context of the advertisement itself. This connection is independent of whether or not they are logically connected outside the advertisement. The connection produces meaning making the advertisement relevant. Contextual relevance is argued in this dissertation as the most effective definition of relevance. However, it is rarely tested empirically in the literature.

All three of the categories differ in the definitions used for relevancy, consequently producing wide and varied results. It is clear that a theoretical perspective of relevance is needed to help produce more consistent results as well as address the deficiencies of subjective and objective relevance. Sperber and Wilson's (1995) Theory of Relevance describes why contextual relevance may better explain relevance than subjective and objective perspectives, thus producing consistency in the literature and addressing potential weaknesses. Sperber and Wilson's (1995) Theory of Relevance is then detailed in the next section.

## Theory of Relevance

### *Introduction*

The Theory of Relevance (TOR) described in this section was proposed by Sperber and Wilson (1995) and unless otherwise noted are the ideas of Sperber and Wilson. They propose a model of relevance that incorporates an inferential model of

communication that extends Grice's (1975) theory of implicature. Grice contends that most sentences in the English language fall short of stipulating a concept or encoding a proposition, and therefore do not describe in careful detail what the speaker wishes to convey. The words used by the speaker can be incomplete but at the same time sufficient enough to allow the hearer to follow the message from additional information derived from the setting and the intended content. In other words, the conversation may leave sizeable gaps of omitted information, but because of the interaction of sender and receiver, those gaps do not hinder the delivery of the message. Grice used the term implicature to capture the implied part or possibly omitted parts of information in a conversation (Lyons 1977). Thus, during communication there are two distinct parts; *explicature* of a sentence, which is the proposition expressed in language, and *implicature*, which are the propositions that are inferred or implicated (Grice 1975).

Sperber and Wilson feel, however, that even explicatures in a conversation requires an element of inference, because the explicit content of a communication is not simply a set of words that can be decoded. They posit an explicature is a combination of linguistically encoded and inferred conceptual features. The amount of explicit information and the amount of inferred information in any given conversation are not fixed (Carston 1988). There is an explicit language contribution in communication but the amount it contributes varies with each communication effort depending on the setting (Carston 1988). It is this setting along with the explicit and implicit information that provides the basis for relevance.

TOR is generally based on the premise that the receiver will make the effort to process a communication if he or she deems it to be relevant. In most cases of communication, the speaker ensures the message is best processed in a specific setting available to the hearer. In turn, the communication will yield enough meaning to be worth the hearer's attention. This is the primary tenet of TOR—every act of communication conveys a presumption of its own relevance. Sperber and Wilson call this tenet the principle of relevance, the key element in human communication processes and comprehension. Several components must exist, however, before communication becomes relevant. These components are assumptions, context and contextual effects. Each is detailed below.

### *Assumptions*

TOR begins with a fact being made known to an individual and how that fact relates to an individual's cognitive environment. A *fact* means genuine knowledge about the world. An example of a fact is an advertisement that displays a black car and the fact is the car is indeed black. The black color of the car is genuine knowledge and few people would dispute this fact. This fact is made known to a person at a given time if and only if he or she can understand and accept its representation as true or at least probably true. People tend to organize their thoughts, however, not from facts but from assumptions. *Assumptions* are identified as information, expectations, sentiments, attitudes, and beliefs people hold about objects in the world around them (Spears 2007). Assumptions can be factual or they can be incorrect and they are typically impossible to differentiate from facts. Since individuals typically feel assumptions are the equivalent

of facts, mistaken assumptions are usually treated by individuals just as if they were genuine facts. At any given time, the cognitive environment of an individual is composed of a set of assumptions that are made known to him or her at that time. Sperber and Wilson identify that for an assumption to be known, an individual must recognize certain assumptions are needed in a particular setting at a particular time. Individuals hold many assumptions but a particular environment determines what assumptions he or she will recognize and use.

### *Context*

Communication actions are designed to make individuals aware of certain assumptions, which is to make the assumptions *manifest*. When assumptions are manifest, they become present and known for a particular time and setting. Assumptions typically already exist in the mind of a person but they are only recognized and used when these assumptions are manifest. Communication does not happen because of random assumptions that are shared between people, but because assumptions are organized in a way that sender and receiver both have a meaningful interpretation of them. That is, communication is an action that is specifically designed to make certain assumptions manifest. A purposeful communication action, such as an advertisement, creates an environment in which assumptions are now connected in a way that they may not have been connected before. This environment is a *context*. The context is a setting in time that connects objects and assumptions about those objects. The objects and assumptions of those objects may be completely unconnected or have no relation outside of the contextual environment but inside the context they become manifest and linked.

For the purposes of this dissertation, the advertisement is the deliberate act of advertisers to create a context linking a visual symbol to the product in an advertisement (Spears, Mowen and Chakraborty 1996). Gestalt psychology best describes the process of building these links (Spears, Mowen and Chakraborty 1996). Gestalt theory suggests that the whole of an object is greater than the sum of its parts (Kearsley 1998). Consequently, the whole of an advertisement may carry a different and altogether greater meaning than the individual components of the product and symbolic image. In viewing the whole, a cognitive process takes place, and the mind links the components in a specific context (Kearsley 1998). Thus, assumptions about the product and assumptions about the visual are connected when seen as a gestalt whole in an advertisement context.

### *Contextual Effects*

Sperber and Wilson identify effects that occur as a direct result from combining manifest assumptions in a context as *contextual effects*. Contextual effects are implications that arise from the connection of objects in a specific context. Two contextual effects can occur when individuals are exposed to a context that combines assumptions. First, independent assumptions connected by a context may give rise to new assumptions. In this way, old assumptions are presented in a new way thus creating new information. For example, an advertisement context may connect a visual and a product—making assumptions prior to the context about both the visual and the product to become manifest. In addition to these manifest assumptions, a viewer may have to bring to mind other previously untapped assumptions to make sense of the connection

between visual and product. These new previously unrecognized assumptions are the effects of the context.

Secondly, existing assumptions outside the context can strengthen (or weaken) as a result of being combined in a context. Recall that assumptions are made up of various components such as attitudes, expectations, and beliefs. When an assumption is strengthened components creating the assumption may change in intensity. For example, an attitude about an object may become stronger or weaker after the assumption containing this attitude is manifest through a context. When an assumption is strengthened or weakened items that compose the assumption do not change but the intensity an individual feels toward these components change. Contextual effects of strengthening or weakening assumptions only change intensity of old assumptions but no new untapped assumptions arise.

For clarification, examples are necessary. An advertisement by Dunhill's X-Centric cologne is an excellent advertisement that demonstrates an instance when new assumptions may be generated from a context. The X-Centric advertisement shows a fish with sharp metallic teeth swimming toward a bottle of X-Centric cologne. Outside of the context of the advertisement the visual of the fish may generate assumptions such as: *fishy smell, the uncharted sea* or even *danger*. The cologne outside of the context is likely to generate assumptions of *smells good, makes the wearer more attractive*, or even *masculinity*. Outside the context of the advertisement assumptions about the fish and cologne are unlikely to be connected. Once both objects of the fish and the cologne are presented in the communication of the advertisement, they become connected because of

gestalt processes. The assumptions about the fish and the cologne are manifest because of the advertisement, but now new assumptions are likely to arise because the viewer attempts to make sense of why the two objects of the fish and cologne are in the same advertisement. Recall, a tenet of relevance says that people assume that communication directed at them has some meaning; therefore a viewer would likely ask what the advertisement is trying to communicate. A consumer may search for meaning and bring to mind untapped assumptions to understand the message conveyed. New assumptions that were previously untapped outside the context now are likely to become manifest such as *being on the prowl for a partner* or *this cologne makes me feel dangerous*. Table 2 shows possible assumptions for this type of visual and product outside the context and new untapped assumptions that may arise as a result of the context.

Table 2 - Possible Assumptions for Incongruent Visuals and Product

Object	Possible Assumptions outside Context	Possible Assumptions strengthened inside Context	Possible New Untapped Assumptions inside Context
Fish	1) fishy smell 2) the uncharted sea 3) danger	--	--
Cologne	1) smells good 2) makes the wearer more attractive 3) masculinity	--	1) On the prowl for a partner 2) this cologne makes me feel dangerous.

An advertisement featuring Amazing perfume can be used to illustrate the contextual effect of strengthening assumptions. The Amazing perfume advertisement shows an attractive woman in sexually appealing clothing behind a bottle of Amazing perfume. Viewers may hold assumptions for the woman outside the context such as:

*attractiveness, sexually appealing, and beauty*. In this example, however, one could hold the same assumptions of *attractiveness, sexually appealing, and beauty*, outside the context for perfume. When a visual of an attractive woman is combined with perfume, assumptions about these objects can be strengthened by the contextual environment created by the advertisement. For example, a person viewing the advertisement may feel perfume makes them feel attractive (old assumption), but when viewing this advertisement (Figure 2) then these feelings become more intense (assumption strengthened). Possible assumptions strengthened for the perfume may be: *this perfume makes me feel more attractive, this perfume makes me feel more sexually appealing, and this perfume makes me feel more beautiful*. No new untapped assumptions are necessary since a viewer can make sense of the connection between woman and cologne using only assumptions that existed outside the context. Table 3 summarizes the possible assumptions that may arise from this type of visuals linked with the product and the corresponding contextual effects.

Table 3 - Possible Assumptions for Congruent Visuals and Product

Object	Possible Assumptions outside Context	Possible Assumptions strengthened inside Context	Possible New Untapped Assumptions inside Context
Woman	1) attractiveness 2) sexually appealing 3) beauty	--	--
Perfume	1) attractiveness 2) sexually appealing 3) beauty	1) I feel more attractive 2) I feel sexually appealing 3) I feel beautiful	--

### *Definition of Relevance*

Contextual effects of new untapped assumptions and strengthening assumptions are implications that arise in the mind of the viewer about the meaning communicated in the advertisement. This gives way to relevance. *Relevance* is a meaningful interpretation of connection between two or more objects in a specific context. Sperber and Wilson's definition says during a meaningful interpretation an individual determines a connection exists and what the connection means. The context creates an environment for the connection which provides key information to help the receiver understand the message. The contextual effects are implied meanings generated from the connection created by the context of the message. Together, the context and contextual effects create relevance. For example, individuals may find the fish in the X-Centric advertisement to be relevant because they may be able to understand the advertisement as a whole when untapped assumptions arise. In addition, individuals may find the woman in the Amazing perfume advertisement to be relevant when their feelings intensify about the perfume.

This definition of relevance based on Sperber and Wilson's Theory of Relevance (TOR) differs from the previous conceptualizations of subjective and objective relevance found in the literature. Recall that subjective relevance deals with whether objects under consideration are important to an individual personally. TOR does not require an individual to maintain a certain level of interest in an object for relevance to exist. For example, according to subjective relevance, a man viewing the advertisement about Amazing perfume may find it to be irrelevant if he has no use for women's perfume. Assuming no event occurs to raise his interest level then he would, according to

subjective relevance, find the advertisement to be irrelevant. TOR would argue if the same man viewed Amazing perfume he could find the advertisement relevant, because he could develop a meaningful interpretation regardless of his interest level in the product.

Objective relevance is when one or more objects under consideration have a close logical connection. The issue that object relevance fails to address is the context.

Objective relevance is often tested independently from a context (Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991). Objects tested for relevance outside of a context have been typically expected to remain relevant or irrelevant inside the context of the advertisement. Several studies have found that relevance for particular objects change in different contexts (Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991). This change, while unexplained by objective relevance, is consistent with TOR. Since one of the crucial aspects of TOR is the context, two objects that have no logical connection outside of a context could become logically connected through the context of an advertisement. Thus, as in the X-Centric advertisement, the fish and the cologne unconnected outside of the advertisement are now connected inside the advertisement providing a basis for a meaningful interpretation.

### *Response*

Sperber and Wilson articulate if an individual determines a communication is relevant then information is worth processing. They say a response is likely to occur because the information is deemed relevant and useful in some respect. When an individual finds an advertisement relevant because new untapped assumptions arise or old assumptions are strengthened, then this change in assumptions will act as an input to

either maintain or update a consumer's perceptions and attitudes toward an object (Kleijnen et al 2005).

### *Summary of TOR*

Sperber and Wilson's Theory of Relevance expresses the relationship between assumptions and a context. If an advertisement gives rise to new untapped assumptions or old assumptions are strengthened, it produces relevance. Relevance is a meaningful interpretation of a connection between two or more objects in a specific context. Relevance differs from subjective relevance by arguing that individuals can have a meaningful interpretation of an advertisement—finding the advertisement to be relevant even if they are uninterested in the product. Subjective relevance conceptualizations say that if one is uninterested in an object then an advertisement about that object is irrelevant.

Relevance differs from objective relevance by arguing that a connection between objects can be established through a context. This connection is independent of whether or not the objects have a close logical connection outside of a given context. Objective relevance has been used to say that if objects do not have a close logical connection outside of any context, then they are irrelevant. Conversely, objective relevance says those objects that hold a close logical connection will continue to have this relationship regardless of the context. TOR posits that environments can be created to connect objects that formerly held no logical connection. When people understand this connection then relevance can exist.

The present conceptualization of TOR agrees fundamentally with contextual relevance used in the literature. However, contextual relevance is relatively untested in the literature. Finally, as people determine that a communication is relevant then it gives them reason to respond. Table 4 compares how subjective, objective, and contextual relevance relate to each other.

Table 4 – Contextual, Objective, and Subjective Relevance

Contextual Relevance	
<ul style="list-style-type: none"> <li>• A meaningful interpretation of a connection</li> <li>• Applies Context</li> <li>• Provides for Objective and Subjective interpretations</li> <li>• Explains non-objective and non-subjective relevance using contextual information</li> </ul> <p>Theories in this Domain:</p> <ul style="list-style-type: none"> <li>▪ Theory of Relevance (Sperber and Wilson 1995)</li> <li>▪ Theory of Implicature (Grice 1975)</li> </ul>	
Objective Relevance	Subjective Relevance
<ul style="list-style-type: none"> <li>• Logical Connection</li> <li>• Shared Attributes</li> <li>• Does not apply context</li> <li>• Does not explain non-objective relevance</li> </ul> <p>Theories in this Domain:</p> <ul style="list-style-type: none"> <li>▪ Congruency (Heckler and Childer 1992)</li> <li>▪ Match-up Hypothesis / Fit (Kahle and Homer 1985; Kamins and Gupta 1994)</li> </ul>	<ul style="list-style-type: none"> <li>• Involvement</li> <li>• Personal interest</li> <li>• Target Marketing</li> <li>• Does not apply context</li> <li>• Does not explain non-subjective relevance</li> </ul> <p>Concepts in this Domain:</p> <ul style="list-style-type: none"> <li>▪ Involvement (Petty and Cacioppo 1981)</li> <li>▪ Personal relevance (Lastovicka 1983)</li> </ul>

### Model Overview

The model developed in this dissertation consists of context, contextual effects, and response. The context is the starting point of this model. Recall the context is an environment that allows connection of two or more objects. In advertising, context is

presented to the consumer by way of the advertisement (Spears, Mowen and Chakravorty 1996). Advertisers purposely create advertising contexts by connecting products with visual symbols in advertisements. The visual symbol derives its meaning from the culturally constituted world, made up of values, ideas, beliefs, and meanings. The context of the advertisement is purposely loaded with assumptions and meaning by associating the symbolic visual with the product. Meaning is transferred to the product from the visual through a unit connection developed by the advertisement (Spears, Mowen and Chakravorty 1996; McCracken 1986). A Gestalt process is used to form this unit connection since it is a design strategy of advertisers to make consumers see the whole of an advertisement rather than specific parts of it (Kearsley 1988; Mowen 1980). Therefore, the context for the model used in the dissertation refers to the advertisement linking a symbolic visual with a product.

The second part of the model is contextual effects that give rise to relevance. Recall contextual effects are a change in assumptions that arise as a direct result of two or more objects connected in a specific context. There are two main contextual effects: new untapped assumptions arise or assumptions strengthen (or weaken). These effects are implications about message which the individual uses to develop a meaningful interpretation of the advertisement. The model implies if an individual cannot derive a meaningful interpretation of an implied connection between a visual and product, then relevance may not occur. For example, using table 2, if an individual cannot bring to mind new untapped assumptions for the connection of fish and cologne, they may feel the

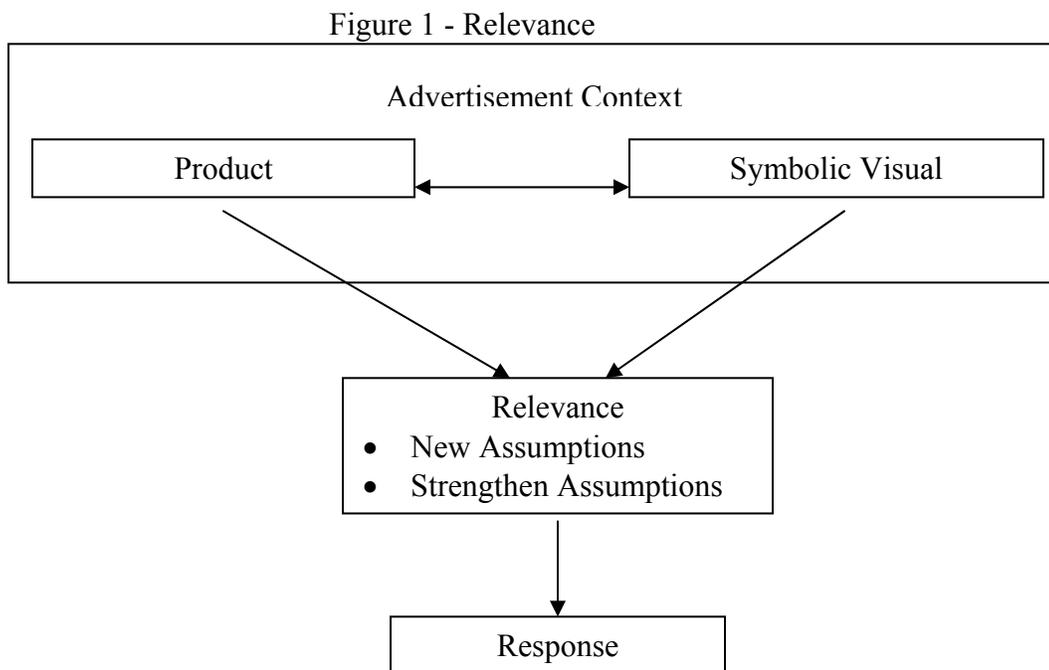
objects are unconnected and irrelevant. However, it is the advertisers' intent to create relevance and if relevance does indeed occur a response is likely.

The third part of the model is a response to relevance. Sperber and Wilson (1995) express if an individual determines that a communication is relevant then the information is worth processing at that point. In other words, further cognitive action is likely to be pursued. Mitchell and Olson (1981) used TRA (Fishbein and Azjen 1975) to offer suggestions for how consumers may respond to relevant and non-relevant visuals in advertising. The TRA model says that consumers possess beliefs about various attributes of any particular product and the combination of these beliefs form the overall attitude a person has for a product. This overall attitude is presumed to have a causal influence on behavior intentions, such as consumer's intention to purchase (Fishbein and Azjen 1975). Mitchell and Owen (1981) used TRA (Fishbein and Azjen 1975) as a basis for measuring responses to relevant symbolic visuals in advertisements. They found that not only did beliefs about product attributes have an effect on attitude toward brand but attitude toward the advertisement had an effect as well. Thus, Mitchell and Olson (1981) measured belief intentions, attitude toward the brand, attitude toward the advertisement, and purchase intentions. Following Mitchell and Olson's use of TRA, it is assumed that if an advertisement is found to be relevant, then it will logically have an effect on belief levels about the product attributes, attitude toward the brand and purchase intention.

Many studies using relevant visuals and products in advertising (i.e. Lutz and Lutz 1977; Mitchell and Olson 1981; Miniard, Bhatla, Lord Dickson and Unnava 1991; McQuarrie and Mick 1992; Meuhling, Stoltman and Grossbart 2001; Wang 2006)

measured similar dependent variables (attitude toward product, attitude toward advertisement, purchase intention, and recall) to ascertain the responses from consumers.

Regardless of the dependent variables used, it is clear from the literature, as well as TOR, that response is a crucial part of this model in this study. A pictorial representation of the model is presented below in Figure 1.



Hypothesis Development

### *Related Theories*

Tables 2 and 3 show what contextual effects may occur when two different visuals and products are combined in an advertising context. Contextual effects may differ for each visual because the fish and cologne are considered to be incongruent while the woman and perfume are considered congruent.

Congruency is a concept closely related to relevance. Heckler and Childer (1992) defined congruency as when two or more objects are expected to be related and also hold objective relevancy. In other words, a visual may be congruent with a product if they are expected to have some relationship and hold a close logical connection. Heckler and Childer (1992) used objective relevance in their definition of congruency because the connection they describe is not context dependent. Congruency has typically been defined as objective relevance (Houston, Childers and Heckler 1987; Unnava and Bunkrant 1991).

Some researchers have shown interest in the elaboration of visuals that appear to be congruent or incongruent to various products. Meyers-Levy and Tybout (1989) examined how the presentation of congruent versus incongruent information about soft drinks affected the development of attitudes toward those products. Houston, Childers and Heckler (1987) also looked at the effects of congruent versus incongruent pieces of information in the verbal and visual portions of print advertisements. These researchers and others (i.e. Sujan, Bettman, and Sujan 1986) have found one commonality that incongruent information appears to prompt more elaborative processing. Many of these studies have used social cognition research as a theoretical framework to help explain consumer elaboration (Heckler and Childers 1992).

The social cognition perspective identifies memory in the form of associative networks and was developed for the enhancement of certain types of behavior in studies of personal memory (Hastie 1980; Srull 1981; Srull and Wyer 1989). Many of these studies looked at how memory was enhanced through incongruency.

One of the most extensive models developed in this area is the associative storage and retrieval model proposed by Hastie (1980). He hypothesized that information incongruent with a prior assumption about a person is remembered better than congruent information. He defined incongruity as information in direct conflict with prior expectations. Information incongruent with a prior assumption is more difficult to comprehend and, when received, will be held in working memory longer than congruent information. Thus, incongruent information stimulates more elaborate internal processing. Hastie expressed this elaboration leads to a greater number of associative pathways linking the incongruent information to existing knowledge. Other studies have shown that these additional pathways developed from incongruent information produced greater recall (Hastie and Kumar 1979; Srull 1981, Lui and Brewer 1983).

Research in the area of Schema Theory has also found similar results for congruent visuals. Schema Theory asserts consumers develop ideas in memory by using stored frameworks of knowledge about objects represented by nodes in semantic memory (Brown 1972). Semantic memory is a network of ideas and cognitions connected directly or indirectly to the initial object in the mind of the individual (Lynch and Srull 1982). Meyers-Levy and Tybout (1986) examined Schema Theory by testing the effects of giving consumers product attribute information that was congruent or partially congruent with an activated schema. They found that schema inconsistency resulted in more elaborative processing and improved memory over consistent schemas.

While there is a considerable amount of research suggesting that incongruity is effective on consumer's memory, there is also a considerable amount of research (Lutz

and Lutz 1977; Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991) that suggest congruency is effective as well, asserting that individuals tend to remember more readily information that is congruent with a prior expectancy (Houston, Childers and Heckler 1992). Srull (1981) suggests that the nature of the memory task influences whether congruent or incongruent information is remembered best. In a recall setting, task information that is incongruent is remembered best because the greater number of associative paths tends to enhance retrieval. In contrast, a recognition task will bypass the retrieval process. Thus when congruent information is presented, it is linked to expectancies at the ideal level, therefore allowing easier recognition (Srull 1981).

Celebrity endorsement literature also supports a congruency approach by using the match-up hypothesis. The match-up hypothesis refers to the harmony or fit between the attributes of a celebrity endorser and the attributes of the product being endorsed (Till and Busler 2000). The match-up hypothesis is thought to function as a key determinant of endorsement effectiveness (E.g., Friedman and Friedman 1979; Kahle and Homer 1985; Kamins 1990; Kamins and Gupta 1994; Till and Busler 2000). Friedman and Friedman (1979) concluded that the better the celebrity/product fit, as perceived by consumers, the higher the level of endorsement effectiveness. Till and Busler (2000) found that celebrity and product congruency was effective for certain measures of effectiveness such as brand attitude, but not as effective for other measures such as purchase intention. A meta-analysis of the existing celebrity endorsement literature by Amos, Holmes and Strutton

(2007) found the match-up hypothesis or fit between celebrity and product does significantly improve celebrity endorser effectiveness.

Congruency and match-up theories are effective at explaining how objects that share similar attributes can be connected in an advertisement. Both theories use an objective form of relevance because of the logical relationship that is expected to exist outside of any context. The match-up hypothesis does not allow for any illogical relationship because it does not offer an explanation as to why objects that possess dissimilar attributes may be effectively connected in an advertisement. Congruency theory does allow for illogical relationships but, like the match-up hypothesis, does not address how the context may provide an environment under which incongruent objects can become connected. TOR provides explanation about connections of both congruent and incongruent objects and how the context contributes to the implications that arise. Thus, this dissertation asserts that TOR is the appropriate theoretical approach to explain the relevance of congruent and incongruent objects in the context of an advertisement.

#### *Congruent and Incongruent Visuals*

The literature suggests that both congruent and incongruent symbolic visuals and products used in advertising can produce contextual effects on consumers. Recall that congruent visuals are expected to hold a close logical connection with a product in an advertisement. The visual is incongruent if it does not have an expected logical relationship with the product. Contextual effects that arise may be different between congruent and incongruent visuals. The Elemental Congruence Model (ECM) developed by Spears, Paswan and Kahla (2006) posits what type of effects may arise when either

congruent or incongruent information is presented in an advertisement. The ECM proposed that an array of elements used in an advertisement will lead to either a narrow or wide range of implications. ECM suggests when the product and the elements of an advertisement share many assumptions, a narrow range of implications arise because consumers tend to focus on congruent implications since they are direct and accessible. ECM also suggests some products, such as cruises vacations, hold a wider range of ideas and assumptions for consumers. Thus creating congruence between advertising elements and this type of product is more difficult. Advertising elements such as symbolic visuals may provide the consumer with a wider range of assumptions to choose from. Thus, congruency between the product and the visual elements in the advertisement may be easier to establish when there is a larger set of total assumptions among the visual and the product.

Visual advertising elements congruent with a product are considered to be more literal in nature because the range of meanings is narrow and direct (Mothersbaugh, Huhmann and Franke 2002; Mitchell 1986). Consumers hold expectations for what this connection means and may have already predetermined what attributes the visual and product share (Cacciari 1998). Expectations are met when assumptions about those expected shared attributes arise and no new untapped assumptions are necessary to create a meaningful interpretation. Researchers have suggested effects of connecting a visual congruent with a product in advertisements (Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991) will cause beliefs about the product to change in intensity. Recall that assumptions are made up of beliefs and ideas about objects in the

world around them. When a visual is paired with a congruent product individuals are able to focus on those expected meanings for the product. In other words, belief levels about product attributes that are shared with the visual become more intense (Mitchell and Olson 1981).

TOR suggests that congruent visuals would strengthen assumptions. Recall the example of Amazing perfume where both the visual and product could produce similar assumptions outside and inside the context. The congruent visual of the woman is expected to hold a close logical connection to perfume. According to TOR, the components (i.e. belief levels) of the assumption could be strengthened within the context of the advertisement. TOR also posits no new untapped assumptions are needed for a meaningful interpretation of an advertisement employing a congruent visual and product. Therefore any cognition that arises from the advertisement is likely to represent literal preexisting assumptions about the product rather than untapped assumptions. The following are hypothesized:

H1: Belief levels about product attributes for the congruent visual (visual is congruent with the product in an advertisement), will be greater than those for an advertisement without a visual.

H2: For the congruent visual, the number of cognitions about the product will be greater than the number of cognitions about the visual.

Incongruent visuals, as compared to congruent visuals, require some type of resolution so individuals can acquire a meaningful interpretation of the advertisement (McQuarrie and Mick 1996; Toncar and Munch 2001). Rather than a direct literal meaning, the visual now conveys indirect and less precise meanings. Consumers search

beyond the literal, because a direct and narrow meaning is not available, and may use a metaphorical meaning. A *metaphor* is an object meant to represent something other than itself (McQuarrie and Phillips 2005). The fish in the Dunhill X-centric cologne example, connected to the cologne in the advertisement context could become a metaphor for *being on the prowl for a partner* or *living dangerously*. The implied meanings are metaphorical and do not represent the fish or the cologne directly but indirectly. Other meanings could be derived but require individual interpretation since the connection of the fish and cologne could produce many different meanings. Different meanings come from comparing the similarities and dissimilarities between the visual and the product (Black 1962). In the process of comparison, consumers search for congruent literal meanings between visual and product. If none are found quickly, then he or she will conduct a more elaborate search for a wider range of metaphorical solutions (Sawyer and Howard 1991). Consequently, the connection between the incongruent visual and product creates less precise meanings giving way to a wide array of metaphorical meanings that can be used for interpretation. This process is not confusing because consumers typically realize the advertiser has invited them to elaborate on how the incongruity can be resolved (Phillips 1997). Thus, consumers who encounter an incongruent visual are likely to generate metaphorical untapped assumptions about the visual to generate a meaningful interpretation of the connection between visual and product (McQuarrie and Phillips 2005; Sperber and Wilson 1995).

TOR suggests incongruent visuals will produce new untapped assumptions. Recall the Dunhill X-Centric cologne example where the visual and product could produce

dissimilar assumptions outside the context of the advertisement. The incongruent visual of the fish is not expected to hold a close logical connection to the cologne. According to TOR, new untapped assumptions are needed to derive a meaningful interpretation of the advertisement containing the fish and the cologne together. Many new untapped assumptions may be produced from the visual because meanings are now less precise and are open to individual interpretation. TOR predictions for incongruent visuals are:

H3: The number of total cognitions will be greater for the incongruent visual (the visual is not congruent with the product in an advertisement) than the number of total cognitions for the congruent visual.

H4: Belief levels will not be a significantly different between the incongruent visual and the advertisement without a visual.

H5: For the incongruent visual, the number of cognitions about the visual will be greater than the number of cognitions about the product.

Call to mind what TOR says about the two effects of a context on a connection of objects. First, existing assumptions can strengthen (or weaken) as a result of two objects being combined in a context. Recall that assumptions are made up of various things such as attitudes, expectations, and beliefs. When an assumption is strengthened or weakened components of assumptions do not change but the intensity of these components change (Sperber and Wilson 1995; Mitchell and Olson 1981). Contextual effects of strengthening or weakening assumptions only change intensity of old assumptions but no new untapped assumptions arise. The intensity of old assumptions could range from small to large (Mitchell and Olson 1981). The difference implies that a large change

could represent a higher degree of relevance while a small change may represent a smaller degree of relevance (Miniard, Bhatla, Lord, Dickson and Unnava 1991).

Secondly, independent assumptions that are connected through an advertising context give rise to previously unthought-of assumptions. In this way, old assumptions are presented by a context in a new way thus creating new information. An advertisement that connects two objects provides a context for assumptions about both objects to become manifest, but in addition, other previously untapped assumptions arise due to the connection. These new previously unrecognized assumptions are the effects of the context. Recall that many new untapped assumptions are expected for incongruent visuals. If many new untapped assumptions are generated by the visual then viewers are arriving at meaningful interpretations of the advertisement. Conversely, if few new untapped assumptions are generated by the visual then viewers are not developing a meaningful interpretation of the advertisement. TOR would suggest that more untapped assumptions about the visual would imply a high degree of relevance, while few untapped assumptions would demonstrate low relevance. Thus, the following is hypothesized:

H6: For the congruent visual, belief levels about product attributes will be positively associated with relevance.

H7: For the congruent visual, the average number of total cognitions will have no association with relevance.

H8: For the congruent visual, the number of cognitions about the product will have a positive association with relevance.

H9: For the incongruent visual, the number of total cognitions will be positively associated with relevance.

H10: For the incongruent visual, belief levels will have no association with relevance.

H11: For the incongruent visual, the number of cognitions about the visual will have a positive association with relevance.

TOR articulates that relevance is also related to the ease with which a meaningful interpretation can be found. It is relatively easy for individuals to arrive at an understanding of a connection between product and congruent visual because the meanings are literal and easily brought to mind. No extensive cognitive search has to occur for such literal thoughts. In contrast, incongruent visuals require more effort to develop a meaningful interpretation because the individual must search for reasons of the connection to the product. Thus the following is posited:

H12a: Relevance will be lower for the incongruent visual, than for the moderately congruent visual.

H12b: Relevance will be lower for the incongruent visual than for the congruent visual.

H13a: Relevance will be higher for the moderately congruent visual than for the incongruent visual.

H13b: Relevance will be lower for the moderately congruent visual than for the congruent visual

H14a: Relevance will be higher for the congruent visual than for the incongruent visual.

H14b: Relevance will be higher for the congruent visual than for the moderately congruent visual.

Researchers have long been interested in the responses evoked by visuals in advertisements and the effects from those responses. Shepard (1967) discovered that

recognition memory was superior for visuals compared to textual information. Many researchers have replicated his findings (i.e. Paivio 1976) which appeared to lead to a picture superiority effect. Additional research moved beyond a simple comparison of visuals to text, but examined other effects of visuals to consumers. The effects of visuals on memory have been observed (Childers and Houston 1984; Houston, Childers and Heckler 1987; Unnava and Bunkart 1991) as well as consumer judgments (Edell and Staelin 1983; Miniard, Bhatla, Lord, Dickson and Unnava 1991; Mitchell 1986; Smith 1991; Yi 1990) about individual's attitudes and behaviors. Other investigations have looked at how pictures enhance verbal information (Rossiter and Percy 1980; Smith 1991; Yi 1990) and the potential moderating role of involvement (Childers and Houston 1984; Miniard, Bhalta, Lord, Dickson and Unnava 1991).

Rossiter and Percy (1980), for example, examined the effect of visuals on belief claims on product attitude and purchase intentions. Their findings suggested that visual content is just as capable as verbal content in increasing attitude toward product. Rossiter and Percy (1980) also suggested that their findings showed that a visual emphasized in an advertisement produced the most favorable attitudes toward the product and purchase intentions. Yi (1990) discovered visual information that merely hinted at product attributes and verbal information in an advertisement enhanced long-term memory providing a strong case that attitude toward brand and purchase intention was positively affected.

Mitchell and Olson (1981) used the Theory of Reasoned Action (TRA) (Fishbein and Ajzen 1975) as a basis for measuring responses to relevant symbolic visuals in

advertisements. The TRA model says that consumers possess beliefs about various attributes of any particular product and the combination of these beliefs form the overall attitude a person has for a product. This overall attitude is presumed to have a causal influence on behavior intentions, such as consumer's intention to purchase (Fishbein and Azjen 1975). They found that not only did beliefs about product attributes have an effect on attitude toward brand but attitude toward the advertisement has an effect as well. Thus, Mitchell and Olson (1981) measured belief intentions, attitude toward the brand, attitude toward the advertisement, and purchase intentions. Recall that assumptions about objects are composed of information, expectations, sentiments, attitudes and beliefs people hold about objects in the world around them (Spears 2007). Assumptions include belief levels about product attributes, attitude toward the brand and attitude toward the advertisement. According to TRA, these components have a direct influence on purchase intention. Recall TOR posits visuals congruent with a product are expected to change intensity of belief levels. The beliefs in turn have a direct influence on attitude toward brand. Visuals incongruent with product attributes are expected to produce new untapped assumptions not accessed by consumers prior to being exposed to the advertisement. These untapped assumptions bring about a meaningful interpretation of the advertising message. Mitchell and Olson (1981) found that assumptions about visuals are indicators of individuals' overall attitude of the advertisement. Thus, when contextual effects occur (strengthened assumptions or new untapped assumptions) a direct impact on attitude toward brand and attitude toward advertisement is expected. Both attitude toward product and attitude toward advertisement are expected to directly affect purchase

intention (Mitchell and Olson 1981; Fishbein and Azjen 1975). TOR posits when contextual effects occur they provide meaningful interpretation of the visual product connection, consequently producing relevance. When a meaningful interpretation arises from a connection of visual and product in a context, then viewers are likely to respond to this relevant communication (Sperber and Wilson 1995).

Researchers (i.e. Mitchell and Olson 1981; Heckler and Childers 1997; Minard, Bhalta, Lord, Dickson and Unnava 1991) have also supported the belief that congruent visuals should produce positive attitudes toward advertisement, attitude toward product, and purchase intentions over incongruent visuals. Results of experiments conducted by Mitchell and Olson (1981) and Minard, Bhalta, Lord, Dickson and Unnava (1991) have suggested that as visual congruency increases, attitudes and intentions become positive as well. As previously noted, TOR would similarly predict that congruent visuals are more likely to produce positive attitudes when compared to incongruent visuals due to the ease of interpretation (Sperber and Wilson 1995).

Therefore following TOR, Mitchell and Olson (1981), and other researchers (i.e. Lutz and Lutz 1977; Miniard, Bhalta, Lord, Dickson and Unnava 1991; McQuarrie and Mick 1992; Meuhling, Stoltman and Grossbart 2001; Wang 2006), it is predicted that when visuals in an advertisement produce relevance to an individual then it will evoke some type of response (i.e. attitude toward advertisement, attitude toward the product, and purchase intention). It is thus hypothesized:

H15a: Attitude toward the advertisement will be higher for the congruent visual than for the incongruent visual

H15b: Attitude toward the advertisement will be higher for the congruent visual than for the moderately congruent visual.

H15c: Attitude toward the advertisement will be higher for the moderately congruent visual than for the incongruent visual.

H16a: Attitude toward the product will be higher for the congruent visual than for the incongruent visual

H16b: Attitude toward the product will be higher for the congruent visual than for the moderately congruent visual.

H16c: Attitude toward the product will be higher for the moderately congruent visual than for the incongruent visual.

H17a: Purchase intention will be higher for the congruent visual than for the incongruent visual

H17b: Purchase intention will be higher for the congruent visual than for the moderately congruent visual.

H17c: Purchase intention will be higher for the moderately congruent visual than for the incongruent visual.

H18: Relevance will be positively associated with attitude toward the advertisement.

H19: Relevance will be positively associated with attitude toward product.

H20: Relevance will be positively associated with purchase intention.

## Conclusion

The foundation for this study is based on Sperber and Wilson's (1995) Theory of Relevance (TOR). The hypotheses presented in this chapter will guide this research to addressing the goals identified in Chapter I of this dissertation. Testing of hypotheses one through 14 will address question three and research goal two (why visuals incongruent with the product produce relevant effects) and goal four (applying the theory

of relevance to consumer's interpretation of symbolic visuals in advertisements). The testing of hypotheses 15 through 17 will address question two and research goal three (what role relevance plays in relation to specific consumer responses).

The literature review section of relevance has helped address research goal one (what is the proper definition of relevance for symbolic visuals used in an advertising context). The section detailing TOR has addressed question one and partially addressed research goal one. A scale development of relevance will complete this objective. The scale development of relevance is outlined in Chapter III.

## CHAPTER III

### STUDY I

#### Introduction

Chapter III details how relevance has been measured in the literature and describes study I. Study I demonstrates how the relevance scale was developed from the theoretical concept of relevance. The relevance scale developed in this chapter completes research goal one set forth in Chapter of I of this dissertation.

#### Scale Development of Relevance

Relevance has been measured primarily as either a dichotomous variable or a continuous variable as shown in Chapter II and Table 1 of this dissertation.

#### *Dichotomous Measurement of Relevance*

Many researchers have developed a dichotomous measure of relevance only to achieve a manipulation to measure the change of various dependent variables such as attitude toward advertisement, attitude toward brand, and purchase intention. Typically, visuals were pre-tested with students who ranked the visuals against the product, message of advertisement or the advertising copy. Past researchers instructed students to determine if visuals were relevant or non-relevant (Miniard, Bhatla, Lord, Dickson and Unnava 1991; Hecklers and Childers 1992; Lee and Ang 2003; Wang 2006), consistent or discrepant (Houston, Childers and Heckler 1987; McQuarrie and Mick 1992), and diagnostic or non-diagnostic (Baker and Lutz 2000). Other researchers decided what visuals would be relevant or irrelevant without any pre-testing (Lutz and Lutz 1977; Mitchell and Olson 1981).

Two problems arise when researchers use a simple dichotomous method to measure relevance. First, when researchers ask students to rate a visual compared to a product or text of the advertisement, they may be forcing the student outside the advertising context. By forcing the students to analyze parts of the advertisement, then it may become difficult for them to look at the connection of visual / product in the advertising context that would otherwise exist. Secondly, by forcing students outside of the advertising context, they appear to use objective relevance as a basis for relevance or non-relevance. They assume visuals that share attributes with the product are relevant and visuals sharing few or no attributes with the product are non-relevant (i.e Miniard, Bhatla, Lord, Dickson and Unnava 1991). Consequently, congruent visuals are selected as relevant and incongruent visuals are selected as non-relevant. Dichotomous representations of relevance in this manner are not a good evaluation of relevance nor is it consistent with TOR.

#### *Scale Measurement of Relevance*

Researchers have also attempted to measure relevance, not in a dichotomous way, but through some type of continuous scale. Most researchers who used scales to measure relevance were concerned about the subjective relevance of the advertisement. These researchers are typically searching for meaningfulness of an advertisement with respect to the consumer's interests (Lastovicka 1983). Ang and Low (2004), Wells, Leavitt and McConville (1971), Schlinger (1979), Lastovicka (1983), and Meuhling, Stoltman and Grossbart (2001) all developed scales to measure subjective relevance or more specifically, how important a particular advertisement was to the individual.

The usage of such scales becomes problematic for two reasons. First, these scales are designed to see if a particular advertisement demonstrates subjective relevance. Subjective relevance is more useful in evaluating the accuracy of the advertisements' placement in respect to a target market rather than a contextual relevance (Schlinger 1979). Second, there appears to be some confusion with subjective relevance and involvement (i.e. Petty and Cacioppo 1979). The use and measurement of relevance in this subjective way may render the evaluation of relevance as similar to and non-distinct from the concept of involvement. Scales developed to measure subjective relevance are incomplete and inappropriate measures for relevance. It is clear that as with dichotomous measurement, these scales are inconsistent with TOR.

Relevance is measured in the literature in a variety of ways and is thought to convey a variety of meanings. Thus, it is not a surprise that unexpected or inconsistent results arise. A clear scale that adequately measures relevance is needed to further research in the area of symbolic visuals in advertising as well as the consumer behavior field.

## Method

### *Definition*

The scale development of relevance followed Blankson, Cheng, and Spears (2007) and the suggestions of Churchill (1979). To begin the scale development, a clear theoretical definition of relevance must be produced. Thus, relevance, explored in detail in Chapter II, is defined as follows: *Relevance* – a meaningful interpretation of a connection between two or more objects in a specific context.

### *Construct Validation*

Following Churchill (1979), the scale development questionnaire measured two constructs in addition to the relevance construct to assess convergent and discriminate validity. Attitude toward the Advertisement (Mitchell and Olson 1981) was measured to assess convergent validity and Advertisement Complexity (Putrevu, Tan, and Lord 2004) was measured to assess discriminate validity. Relevance and Attitude toward the Advertisement (Mitchell and Olson 1981) are shown in previous discussions in Chapter II to be related and thus should be significantly correlated in a positive manner.

The Relevance scale is measuring the extent to which individuals understand the connection of two or more objects in an advertisement. This understanding arises primarily from the context of the advertisement and not whether the advertisement is simple or complex in design (Sperber and Wilson 1995). Therefore, relevance of the advertisement should or should not take place regardless of the complexity of the advertisement.

### *Item Generation*

Scales identified in the previous discussion that measure subjective and objective relevance were analyzed. One item from a scale developed by Lastovicka (1979) was modified for use and included in the initial pool of items. All remaining items of preexisting scales were examined for consistency with Sperber and Wilson's TOR and except for Lasotvicka (1979) none were found that could be included in the initial pool.

Following extensive review of the literature and observation of advertisements drawn from local and foreign newspapers, an initial pool of item was generated by the

researcher and an academic expert in marketing from a major southwestern university. Small focus group interviews made up of 12 elementary school teachers in a large southwestern US city were conducted to reinforce existing items and to develop additional items for this initial pool. Scenarios were used to help trigger discussion that might promote evaluation of new items (Calder 1977). The emphasis during the early stages of item generation was to develop a set of items which tap into each dimension of relevance (Churchill 1979). The pool of initial items were carefully edited and refined by the researcher and other marketing experts in preparation for actual data collection, resulting in 11 items.

#### *Procedure*

A questionnaire was developed containing these 11 items and each item was measured on a 7-point Likert scale with endpoints of “strongly disagree” (1) and “strongly agree” (7). The questionnaire also included the five items of the Attitude toward the Advertisement scale (Mitchell and Olson 1981) and the two items of the Advertisement Complexity scale (Putrevu, Tan, and Lord 2004). This questionnaire was attached to one of six different advertisements and distributed to 216 undergraduate students in a major southwestern US university.

Actual newspaper advertisements were selected for this study based on the level of congruency between the product and the visual in the advertisement, ranging from highly congruent to incongruent. Two marketing experts were consulted to determine the level of congruency and unanimous agreement was reached for each of the six print advertisements. It was determined that two of the advertisements were highly congruent,

two were moderately congruent, and two were incongruent. A focus group of nine elementary school teachers located in a major southwestern US city was shown the six advertisements and their reactions confirmed the congruency levels determined by the scientists.

South African newspapers of The Star, Business Day, Sunday Times, Business Times Money, Business Report, and This Day were used. All newspapers were printed and circulated between January 1, 2004 and December 31, 2007. These foreign newspapers were used to reduce students' prior exposure to the advertisements, thus curtailing any relevance that may occur due to repeated exposure to US newspaper advertisements (Mitchell and Olson 1981). The newspaper advertisements were written in English, look similar to newspaper advertisements in the US, and were not modified in any way. Students were exposed to only one ad, no multiple exposures were allowed.

## Results

### *Purification*

All 216 completed questionnaires were examined and four were found to have incomplete data and were removed from the sample, leaving 212 used for analysis. The next step in the data analysis was to determine if factor analysis is appropriate. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy was .907 and the Bartlett's Test of Sphericity (Approximate Chi-Square = 678.290,  $df = 15$ ,  $p = .000$ ) was significant at the .01 level. Both of these tests indicate that factor analysis is appropriate for the data (Hair, Anderson, Tatham and Black 2006).

Maximum likelihood extraction was used with varimax rotation to develop the factors. Eigen values greater than one was used as the initial factor determination. Initially a two factor solution was presented but this clearly indicated loadings below the acceptable cut-off of .30 (see Hair, Anderson, Tatham and Black 2006) for 2 items. When these two items were removed a 9 item one factor solution emerged, with all loadings above .30. These 9 items were examined in a Structural Equation Model (SEM) to determine the robustness of the factor structure. LISREL was used to evaluate the 9-item factor but the RMSEA was greater than .10 indicating a poor fit (Byrne 1998). Three items with the lowest factor loadings (loadings below .40) were removed from the factor. This resulted in a 6 item SEM for relevance (Figure 2). The parameter estimates and corresponding t-values are shown in table 7. The 6 item relevance model (Table 8) provides a good fit for the data ( $X^2 = 22.70$ ,  $df = 9$ ,  $p\text{-value} = .00690$ ,  $GFI = .96$ ,  $RMSEA = .087$ ,  $AGFI = .91$ ,  $NFI = .98$ ,  $NNFI = .85$ ,  $CFI = .99$ ,  $IFI = .99$ ). Item descriptions and exploratory factor results can be found in Tables 5 and 6.

Table 5 - Study I: Item Descriptions of Relevance

Item	Description
1	In this ad, the picture and product together have clear meaning to me.
2	It is obvious to me why they used this picture to advertise this product
3	It is clear to me why the advertiser put this picture with this product
4	I understand what the advertiser was trying to say to me about this product by using this particular picture
5	I see a connection between the picture in the ad and the product.
6	Because of the picture used with this particular picture with the product, I had to really question why it was there (R).

Table 6 - Study I: Exploratory Factor Analysis Results for Relevance

Item	Factor Loadings	Item to Total Correlation
1. In this ad, the picture and product together have clear meaning to me.	.842	.854
2. It is obvious to me why they used this picture to advertise this product	.834	.865
3. It is clear to me why the advertiser put this picture with this product	.802	.861
4. I understand what the advertiser was trying to say to me about this product by using this particular picture	.792	.847
5. I see a connection between the picture in the ad and the product.	.780	.855
6. Because of the picture used with this particular picture with the product, I had to really question why it was there (R).	.767	.831
Alpha	.916	
Percentage of Total Variance	70.420	

Figure 2 - Study I: Confirmatory Factor Analysis for Relevance

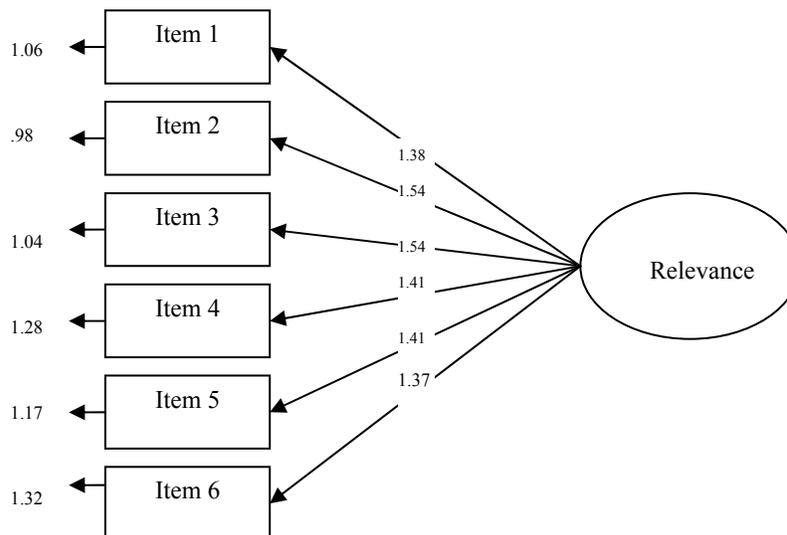


Table 7 - Study I: Estimates of Structural Equation Model for Relevance

Parameters	Estimate	t-value
Relevance → Item 1	1.38	13.32
Relevance → Item 2	1.54	14.35
Relevance → Item 3	1.54	14.15
Relevance → Item 4	1.41	12.80
Relevance → Item 5	1.41	13.09
Relevance → Item 6	1.37	12.48

Table 8 - Study I: Goodness of Fit Statistics for Relevance

Statistic	Measurement
Chi-Square	22.70
Degrees of Freedom	9
P-value	.0069
Root Mean Square Error Approximation (RMSEA)	.087
Normed Fit Index (NFI)	.98
Non-Normed Fit Index (NNFI)	.98
Parsimony Normed Fit Index (PNFI)	.59
Comparative Fit Index (CFI)	.99
Incremental Fit Index (IFI)	.99
Relative Fit Index (RFI)	.97
Critical N (CN)	194.96
Root Mean Residual (RMR)	.082
Standardized RMR	.026
Goodness of Fit Index (GFI)	.96
Adjusted Goodness of Fit Index (AGFI)	.91
Parsimony Goodness of Fit Index (PGFI)	.41

### *Reliability of Scales*

The reliability is excellent with an alpha of .916. This alpha is above the suggestion by Nunnally (1967) that an alpha of .60 or greater is the appropriate figure of newly developed scales. The total cumulative variance explained by the factor is 70.420%.

The Attitude toward the Advertisement (Mitchell and Olson 1981) scale contains seven items measuring individuals' positive and negative feelings about a particular advertisement. This scale had an alpha of .890.

The Advertisement Complexity (Putrevu, Tan, and Lord 2004) scale contains two items measuring individuals' assessment of how complex or how simple an advertisement was. This scale had an alpha of .854.

#### *Results of Construct Validation*

The Relevance scale was compared to two other scales of Attitude toward the Advertisement (Mitchell and Olson 1981) and Advertisement Complexity (Putrevu, Tan, and Lord 2004) to further demonstrate construct nomological validity. Since relevance measures a level of understanding of why objects are placed together in an advertisement, then it should be positively associated with Attitude toward the Ad, which measures the level of positive attitude felt by the respondent toward a particular advertisement. In support of construct validation, relevance and Attitude toward the Ad were significantly correlated ( $r=.680$ ,  $p=.000$ ).

Relevance should also hold no correlation with Ad Complexity (Putrevu, Tan, and Lord 2004). The Ad Complexity (Putrevu, Tan, and Lord 2004) measures how complex an individual feels an advertisement is and should not have an impact as to how relevant the objects in the ad are in relation to one another. The construct was again validated since Relevance and Ad complexity (Putrevu, Tan, and Lord 2004) were not significantly correlated ( $r= -.145$ ,  $p=.052$ ). Correlations can be found in Table 9.

Table 9 - Study I: Correlations for Construct Validity of Relevance

	Attitude Toward Ad	Ad Complexity	Relevance
Attitude Toward Ad	1.00		
Ad Complexity	-.029	1.00	
Relevance	.680*	-.145	1.00

\* $p < .01$

### Discussion of Study I Findings

Study I demonstrates a robust measure of Relevance through EFA and CFA, as well as convergent and discriminant validity with preexisting scales. The Relevance scale appears to be superior measure to dichotomous scales. Recall, the many researchers decided for themselves or had respondents decide if a visual and a product was relevant in an advertisement. The problems that arise from a dichotomous relevance measure are that respondents may no longer view the visual and product in the intended context and may resort to an objective measure of relevance. The relevance scale is designed to allow respondents to use the context of the advertisement to determine if the connection between visual and product makes sense. This appears to be a more accurate assessment of relevance since the respondent judges the relevance of objects within the intended context.

In contrast to the dichotomous measures of relevance, the relevance scale can also determine the level of relevance. It is unlikely that consumers either have a full understanding or no understanding of the connection of objects with no level of understanding in between these two extremes. Instead, the opposite is quite possibly true

with most consumers developing an interpretation of less than a full understanding but more than no understanding at all. Since relevance is the level of understanding one derives from a connection of objects in a context, there can easily be varying levels of understanding. TOR also posits that relevance increases (decreases) with the ease (difficulty) of making a meaningful interpretation (Sperber and Wilson 1995). A dichotomous measure of relevance illogically presumes that either a full or no understanding exists for objects in advertisements. The relevance scale, however, is a mechanism that can demonstrate variability in this understanding, and thus the level of relevance for objects connected in the context of an advertisement.

The scale measures of relevance developed in the literature are designed to capture subjective relevance which is the level of interest an individual has for the product or possibly the visual in an advertisement. These scales only measure one aspect of relevance and are not able to detect other forms of relevance. In fact, since subjective relevance scales are similar to involvement, one could make the case they do not measure relevance at all, but involvement. The relevance measure developed in this study is a more accurate measure of relevance and not necessarily involvement.

It is quite possible that subjective relevance may enhance a person's understanding of a connection between objects. In other words, if a person holds a high interest level for a particular product, when that product is connected to a visual in an advertisement, a high interest level may aid in developing a meaningful interpretation. In contrast, if a person is not involved with a particular product and knows very little about it, they may have a more difficult time developing a meaningful interpretation of the

connection. This may be especially true for incongruent visuals. Thus, individual interest level may have an impact on relevance but they are not the same. The Relevance scale developed in this study is designed to measure relevance not interest or involvement level.

Past measures have examined various aspects of relevance but have fallen short of an accurate portrayal of relevance. The relevance scale developed in this study is a contextual relevance that encompasses both objective and subjective aspects of relevance (see table 4). It is clear that people use the environment of the context along with objective and subjective factors to develop a meaningful interpretation of a connection between objects. Indications from Study I are that the relevance scale does not only measure indicators of relevance (such as if a product and visual share attributes, or if a person is interested in a product), but primarily measures the meaningful interpretation of a connection between symbolic visual and product, which is an accurate representation of relevance.

## CHAPTER IV

### Study II

#### Introduction

Study II was conducted to replicate and extend the works of Mitchell and Olson (1981) and Miniard, Bhatla, Lord, Dickson and Unnava (1991) described in Chapter II. These works attempted to explore the impact of congruent and incongruent visuals in advertisements. While important findings were developed, such as the Attitude toward the Advertisement (Mitchell and Olson 1981), other issues of relevance remained unanswered (Miniard, Bhatla, Lord, Dickson and Unnava 1991). These previous studies are extended by utilizing the Relevance scale developed in Study I and detailed in Chapter III.

#### *Experimental Design*

A between-subjects design was used to avoid demand characteristics that might be created by subjects repeatedly rating the same stimulus (Mitchell and Olson 1981; Kirk 1995). Mitchell and Olson (1981) used a Latin Square design, with each group receiving repeated exposures to four different advertisement manipulations. They felt, however, that classical conditioning may have caused some non-relevant visuals to become relevant after repeated exposures. To avoid such concerns, the resulting between-subjects one-way ANOVA (Table 10) allowed four experimental groups the opportunity to see one of the following advertising manipulations without repetition: product alone, product / congruent visual, product / incongruent visual, and product / moderately congruent visual.

This experimental design eliminates the potential reactivity of within-subjects designs that require repeated responses to the same measures (Kirk 1995). The design appears to provide complete information on the main effects of visual congruency and relevancy. The One-way ANOVA between-subjects design also requires the assumption that interactions involving the group factor are insignificant (Kirk 1995). There is no reason to expect significant interaction between treatments and groups because subjects were randomly assigned to the manipulations.

Table 10 - Experimental Design

	Advertisement Manipulations			
Levels	Soft drink alone	Soft drink paired with orange slices (congruent)	Soft drink paired with beach sunset scene (mildly congruent)	Soft drink paired with iguanas (incongruent)
Subjects	Group #1	Group #2	Group #3	Group #4

The advertisement manipulations containing the visuals and product used in this study will replicate the manipulations used in the Miniard, Bhatla, Lord, Dickson and Unnava (1991) study. A fictitious orange-flavored soft drink was paired with congruent and incongruent visuals. Pre-testing of 36 different visuals led Miniard, Bhatla, Lord, Dickson and Unnava (1991) to the selection of orange slices, beach scene, and iguana visuals to be paired with the orange-flavored soft drink. The iguanas were rated as highly incongruent in the pre-tests and after the Miniard, Bhatla, Lord, Dickson and Unnava (1991) final study. One particular visual of a beach sunset scene was selected as being incongruent in pre-tests for Miniard, Bhatla, Lord, Dickson and Unnava (1991) but results of their main study revealed it was relevant to some degree. Miniard, Bhatla,

Lord, Dickson and Unnava (1991) used one final visual of orange slices as the congruent visual, which was relevant in both their pre-test and the main study. These visuals (iguanas, beach sunset scene, and orange slices) and product (fictitious orange soda) were used and paired together for manipulations in Study II (Miniard, Bhatla, Lord, Dickson and Unnava 1991).

The advertising manipulations were designed by a professional who designs brochures and advertisements for a company located in a major southwestern US city. He was paid for his services, all rights to ownership and usage of the manipulations. All advertisements except the moderately congruent beach scene manipulation contained a blue background with a yellow sunburst directly behind the soft drink can. All advertisements had the heading of *Drink Sunburst* at the top of the ad in an orange color. No other text was used in any of the advertisement manipulations. The soft drink can was computer generated and was orange in color with *Sunburst Orange Soft Drink* on the can with a jagged line behind this text. All advertising manipulations contained this exact soft drink can with no alterations.

The can was centered by itself in the ad directly below the heading in the can only manipulation. The can was moved slightly off-center when the orange slices were added creating a more balanced look for the congruent manipulation. The orange slices were shown slightly behind the can. The moderately congruent manipulation was exactly as the can only manipulation except the blue background was replaced with a beach scene. Finally, the incongruent manipulation was structured like the congruent manipulation

except an iguana lizard was shown beside the can instead of orange slices. The manipulations can be found in Appendix A.

### *Participants*

The sample was composed of 216 students attending marketing classes at a large Southwestern University in the U.S who were given extra credit for participating in the experiment. Lynch (1999) conveys that homogenous samples such as students can be beneficial for theory testing since heterogeneous samples can render small effects insignificant. When the goal is theory testing, external validity has more to do with the conceptual development and the inclusion of moderators rather than methodology (Lynch 1999). Therefore, a selection of students for use in this study was appropriate and beneficial.

Of the 216 questionnaires received, one was omitted because the respondent did not answer a design integrity question, thus indicating that the responses were not complete. This left the final sample size at 215. The demographics of the participants are as follows: 52.8% were female and 47.2% were male. The majority of the participants were undergraduates (97.2%) and only 2.8% were graduates. 94% of the participants were in the age range from 18 to 24. A little more than half (55.7%) of the participants had an income of under \$20,000 per year. 15.7% had an income of \$20,001 to \$40,000 per year and 10% had an income of more than \$100,000 per year. The majority were white (69.6%) followed by African American (11.7%) and Hispanic (8.9%) respondents. 93% of the participants had never married, while only 6.5% were married.

### *Procedure*

The advertising manipulations, a sheet to record cognitions, and a questionnaire were given to participants. The advertising manipulations were distributed prior to any other materials. Students saw only one manipulation one time, hence no multiple manipulations or repeat exposures were allowed.

After they received their particular advertisement manipulation they were then handed a sheet to record cognitions. Following Miniard, Bhatla, Lord, Dickson and Unnava (1991) students were told to write on the cognition sheet any thought they had as they view the advertisement in front of them. The cognition sheet was designed following Wheeler, Petty and Bizer (2005) with ten boxes for participants to record their thoughts. They were told that their thoughts could be positive or negative and to write as many or as few cognitions as they wanted. They were not given a time limit in which they were required to record their cognitions. All cognitions were recorded in approximately 10 to 15 minutes. The students were told to turn their cognition sheet over when they were through recording their cognitions. After students were through recording cognitions, the cognitions sheets were gathered, leaving the student with only the advertisement manipulation in front of them.

After all cognition sheets were removed, the students were then given a questionnaire. Students were not allowed to see the questionnaire before or during recording of cognitions. This prevented any information on the questionnaire to influence the students' cognitions in any way. The questionnaire consisted of the relevance scale developed in Chapter III of this dissertation, the Attitude toward the Advertisement

(Mitchell and Olson 1981) scale, the Attitude toward the Product (Spears and Singh 2004) scale, the Purchase Intention (Spears and Singh 2004) scale, Product Attribute Belief Levels (Lachnit, Busch-Stockfish, Kunert, and Krahl 2003) for orange soft drinks, and items to record demographics. Two integrity check items were also included to detect if the respondent was actually reading the questionnaire. The integrity questions were *Did the advertisement you viewed contain a picture of a soft drink?* and *Did the advertisement you viewed show a grape flavored drink?*

Demographics recorded were gender, education level, age, household income, ethnicity, and marital status. Two questions asked how often the students drank soft drinks and how often they drank orange flavored soft drinks. These questions gave them a range of frequencies with end points of “never” to “more than one per day.”

Students were told to fill out the questionnaire based on the advertisement given to them. They were given all the time they wanted to complete the questionnaire. It took most students approximately 15 minutes to complete the questionnaire. The questionnaires and advertising manipulations were then collected and students were thanked for their participation.

#### *Dependent Variables*

The listing of cognitions and responses to the questionnaire provided measurement data of the dependent variables. The dependent variables are as follows:

*Cognitive Response* – The coding of cognitive responses closely will follow Somboaydh (1991). The data was decomposed into the number of thoughts about the product, the number of thoughts about the visual and total number of thoughts. Coding

was done by the researcher and then recoded by a research colleague not involved in the experiment. Two disagreements were found and resolved through discussion. As reported previously, cognitions were recorded by the subjects before they saw the questionnaire of the other response data so that cognitions were not affected by the attribute belief levels or other items that may have a potential to confound cognitive responses.

*Attribute Belief Levels* – Nine attributes about orange soft drinks followed the findings of Lachnit, Busch-Stockfish, Kunert, and Krahl (2003). The attributes are: *smells fresh, smells like an orange, smells fruity, tastes sweet, tastes like an orange, tastes fresh, tastes fruity, refreshing, and quench thirst*. Unstructured interviews regarding these nine attributes were conducted with students, faculty, staff, and other individuals who are familiar with soft drinks. Most individuals interviewed were in agreement with the Lachnit, Busch-Stockfish, Kunert, and Krahl (2003) items and no attribute was modified for this study. Belief levels about these attributes were recorded in a Likert-type scale with endpoints of “strongly disagree” (1) and “strongly agree” (7). These were presented to the subjects after exposure to the advertisement and after completion of cognition data.

*Other response variables* – Attitude toward the advertisement, attitude toward the product and purchase intention were logical and theoretical choices for response variables in this study. They have also been shown to be major dependent variables in the consumer behavior research field (e.g. Lutz 1977; Mitchell and Olson 1981; Miniard, Bhatla, Lord, Dickson and Unnava 1991; Wang 2006). The five-item Purchase intention

scale and the five-item Attitude toward Product scale were measured on a seven-point semantic scale (Spears and Singh 2004). The four-item Attitude toward the Advertisement used was the seven-point semantic scale used by Mitchell and Olson (1981) and Gardner (1985). As with the recording of the data for belief levels of product attributes, the subjects were asked to record their answers to purchase intention, attitude toward product, and attitude toward the advertisement after cognition data was recorded.

*Relevance* – Relevance was measured using the six-item scale (Table 5) developed in Study I in Chapter III of this dissertation. It was also measured after cognitions were recorded.

## Results

### External Validity: Study II

The Relevance scale developed in Study I was assessed in Study II to determine its level of stability across different samples. A factor analysis (Table 11) was conducted exactly as in Study I using maximum-likelihood extraction with varimax rotation. The six items loaded cleanly onto one factor with all loadings .866 or higher. The factor accounted for 84.987% of the variance, a higher amount than observed in Study I. This scale exhibits excellent external validity.

Table 11 - Study II: Exploratory Factor Analysis Results for Relevance

Item	Factor Loadings	Item to Total Correlation
1. In this ad, the picture and product together have clear meaning to me.	.931	.849
2. It is obvious to me why they used this picture to advertise this product	.928	.896
3. It is clear to me why the advertiser put this picture with this product	.912	.907
4. I understand what the advertiser was trying to say to me about this product by using this particular picture	.907	.909
5. I see a connection between the picture in the ad and the product.	.866	.868
6. Because of the picture used with this particular picture with the product, I had to really question why it was there (R).	.888	.888
Alpha	.965	
Percentage of Total Variance	84.987	

#### Internal Consistency, Convergent, and Discriminant Validity

The 6 items of the Relevance scale were then examined in a Structural Equation Model to determine the internal consistency of the factor structure. LISREL was used to evaluate the 6 item Confirmatory Factor Analysis (CFA) for the relevance scale in the new sample of 214 respondents used for Study II. The 6 item relevance model provided a good fit for the second sample ( $X^2 = 19.63$ ,  $df = 9$ ,  $p\text{-value} = .02035$ ,  $GFI = .97$ ,  $RMSEA = .077$ ,  $AGFI = .93$ ,  $NFI = .99$ ,  $NNFI = .99$ ,  $CFI = .99$ ,  $IFI = .99$ ). Structural model (Figure 3), goodness of fit (Table 12) and standard estimates (table13) are shown below.

Figure 3 - Study II: Confirmatory Factor Analysis for Relevance

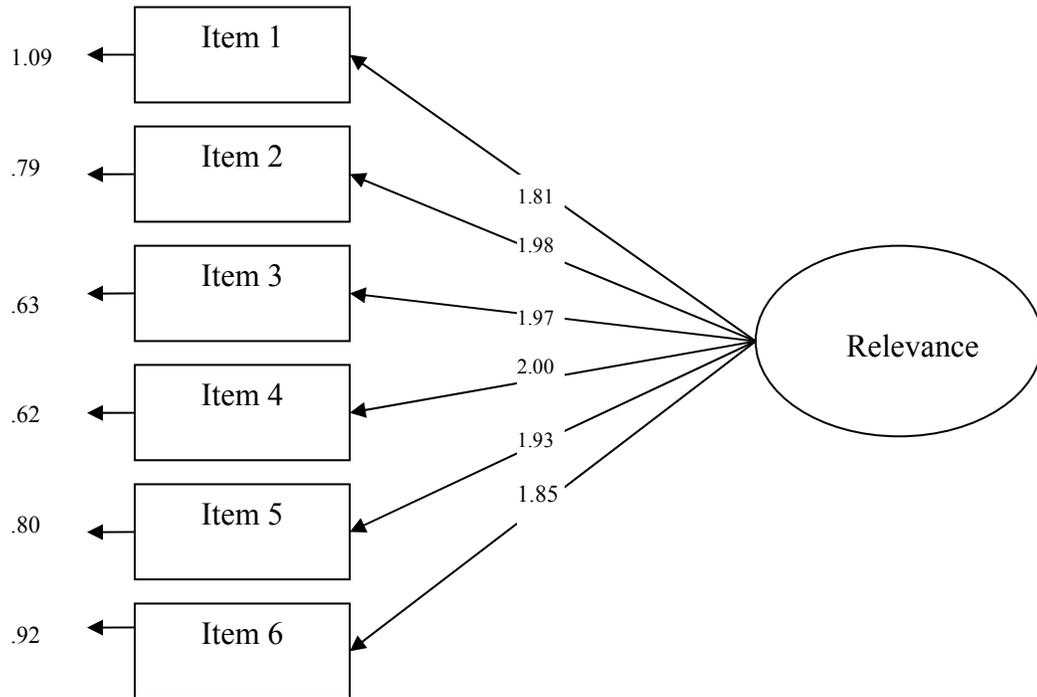


Table 12 - Study II: Estimates of Structural Equation Model for Relevance

Parameters	Estimate	t-value
Relevance → Item 1	1.81	15.33
Relevance → Item 2	1.98	16.73
Relevance → Item 3	1.97	17.24
Relevance → Item 4	2.00	17.34
Relevance → Item 5	1.93	16.57
Relevance → Item 6	1.85	15.96

Table 13 - Study II: Goodness of Fit Statistics for Relevance

Statistic	Measurement
Chi-Square	19.63
Degrees of Freedom	9
P-value	.02035
Root Mean Square Error Approximation (RMSEA)	.077
Normed Fit Index (NFI)	.99
Non-Normed Fit Index (NNFI)	.99
Parsimony Normed Fit Index (PNFI)	.59
Comparative Fit Index (CFI)	.99
Incremental Fit Index (IFI)	.99
Relative Fit Index (RFI)	.98
Critical N (CN)	218.67
Root Mean Residual (RMR)	.055
Standardized RMR	.012
Goodness of Fit Index (GFI)	.97
Adjusted Goodness of Fit Index (AGFI)	.93
Parsimony Goodness of Fit Index (PGFI)	.41

#### Reliability of Scales

The relevance scale exhibited excellent reliability with the sample used in Study II with an alpha of .965. The Attitude toward the Advertisement scale (Mitchell and Olson 1981) had an alpha of .912. The Attitude toward the Product scale (Spears and Singh 2004) had an alpha of .961. Purchase Intention (Spears and Singh 2004) had an alpha of .974. Orange Soft Drink Attributes (Lachnit, Busch-Stockfish, Kunert, and Krahl 2003) had an alpha of .800.

#### Hypotheses Testing

Hypothesis 1. This hypothesis stated that beliefs about product attributes will be higher for an advertisement that contains a congruent visual than an advertisement that shows the product alone. Hypothesis 1 was supported at the aggregate level and for three

individual product attributes. The belief levels about product attributes are significantly ( $F(3,211)=8.554, p=.000$ ) higher at the aggregate level for an advertisement than contains a congruent visual (mean=5.3266,  $p=.050$ ) than for one without a visual (mean=4.7255,  $p=.50$ ) These are shown in tables 14 and 15. Following Mitchell and Olson (1981) individual belief level items were also examined. The individual belief levels (Table 16) that were significantly different were: *The soft drink smells fresh* (no visual mean=3.7059, congruent visual mean=4.9677,  $t=-4.573, df=111, p=.000$ ), *The soft drink smells like an orange* (no visual mean=5.4118, congruent visual mean=5.9677,  $t=-2.137, df=111, p=.035$ ), and *The soft drink would quench my thirst* (no visual mean=4.2549, congruent visual mean=4.9516,  $t=-2.232, df=111, p=.028$ ).

Table 14 - Study II: ANOVA of Aggregate Belief Levels

	Sum of Squares	Df	Mean Square	F	Sig.
Between	36.545	3	12.182	8.545	.000
Within Groups	300.793	211	1.426		
Total	337.338	214			

Table 15 - Study II: Comparisons of Aggregate Belief Levels

Manipulation	Mean	Std. Dev	Std. Error	Mean Difference Comparisons			
				Product Alone	Congruent Visual	Moderately Congruent	Incongruent Visual
Product Alone	4.7255	1.08772	.15231	-	-.60112* ( $p=.050$ )	-.39951 ( $p=.546$ )	.47549 ( $p=.280$ )
Congruent Visual	5.3266	1.02987	.13079	.60112* ( $p=.050$ )	-	.20161 ( $p=.987$ )	1.07661* ( $p=.000$ )
Moderately Congruent V	5.1250	1.24410	.17253	.39951 ( $p=.546$ )	-.20161 ( $p=.987$ )	-	.87500* ( $p=.002$ )
Incongruent Visual	4.8849	1.25553	.08563	-.47549 ( $p=.280$ )	-1.07661* ( $p=.000$ )	-.87500* ( $p=.002$ )	-

\*significant at the .05 level.

Table 16 - Study II: Mean Comparison for Individual Belief Levels

Soft Drink Belief	Mean	Std. Dev	Std Error Mean	T Statistic	P-Value (2-tailed)	Mean Difference
Smells Fresh	3.7059(P) 4.9677(C)	1.64066(P) 1.29270(C)	.22974 (P) .16417(C)	-4.469	.000	-1.26186*
smells like an orange	5.4118(P) 5.9677(C)	1.56431(P) 1.20065(C)	.21905 (P) .154248(C)	-2.137	.035	-.55598*
smells fruity	5.0392(P) 5.6129(C)	1.77720(P) 1.20593(C)	.24886 (P) .15315 (C)	-1.963	.053	-.57369
tastes sweet	5.4510(P) 5.9180(C)	1.50085(P) .91824 (C)	.21016 (P) .11757 (C)	-1.939	.056	-.46705
tastes like an orange	5.5882(P) 5.9677(C)	1.35907(P) 1.17303(C)	.19031 (P) .14897 (C)	-1.593	.114	-.37951
Tastes fresh	5.6667(P) 5.2131(C)	1.32602(P) 1.27951(C)	.144593 (P) .16383 (C)	.340	.734	.45355
Tastes fruity	5.2745(P) 5.5968(C)	1.37227(P) 1.15176(C)	.19216 (P) .14627 (C)	-1.357	.177	-.32226
Refreshing	4.6471(P) 5.1452(C)	1.73001(P) 1.41244(C)	.24225 (P) .17938 (C)	-1.685	.095	-.49810
Quench thirst	4.2549(P) 4.9516(C)	1.74176(P) 1.57259(C)	.24390 (P) .19972 (C)	-2.232	.028	-.69671*

P=Product Alone Manipulation C=Congruent Visual Manipulation

\*significant at the .05 level.

Hypothesis 2. This hypothesis says that there will be more thoughts about the product than for the visual in the advertisement containing a congruent visual. Hypothesis 2 was not supported. There was not a significant difference ( $t=-1.847$ ,  $df=61$ ,  $p=.070$ ) between the number of thoughts about the product (mean=.9355) and the number of thoughts about the visual (mean=.6774) This is shown in Table 17.

Table 17 - Study II: Picture vs. Product For the Congruent Visual

Cognitions	Mean	Std Dev	Std Error Mean	T	Df	Sig. (2-tailed)
Visual	.6774	.56610	.07189	-1.847	61	.070
Product	.9355	.88468	.11235			

Hypothesis 3. This hypothesis stated that there will be more total thoughts for the advertisement containing an incongruent visual than for the advertisement containing the congruent visual. Hypothesis 3 was not supported. There was not a significant difference ( $F(3, 211)=.822, p=.483$ ) in the total number of cognitions for any advertisement manipulation (Table 18).

Table 18 - Study II: ANOVA of Total Cognitions for all Manipulations

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	12.940	3	4.313	.822	.483
Within Groups	1106.660	211	5.245		
Total	1119.600	214			

Hypothesis 4. This hypothesis posited that beliefs about product attributes will not change for an advertisement that contains an incongruent visual from beliefs levels for an advertisement without any visual. Hypothesis 4 was supported. Belief levels for the incongruent visual manipulation (mean=4.25) were not significantly different ( $p=.280$ ) from the product only manipulation (mean=4.7255).

Hypothesis 5. This hypothesis posited that there will be more thoughts about the visual than about the product in the incongruent visual manipulation. Hypothesis 5 was supported. There were significantly ( $t=5.098, df=49, p=.000$ ) more thoughts about the

visual (mean=1.7) than about the product (mean=.88) when the visual was not congruent with the product (Table 19).

Table 19 - Study II: Visual vs. Product for Incongruent Visual

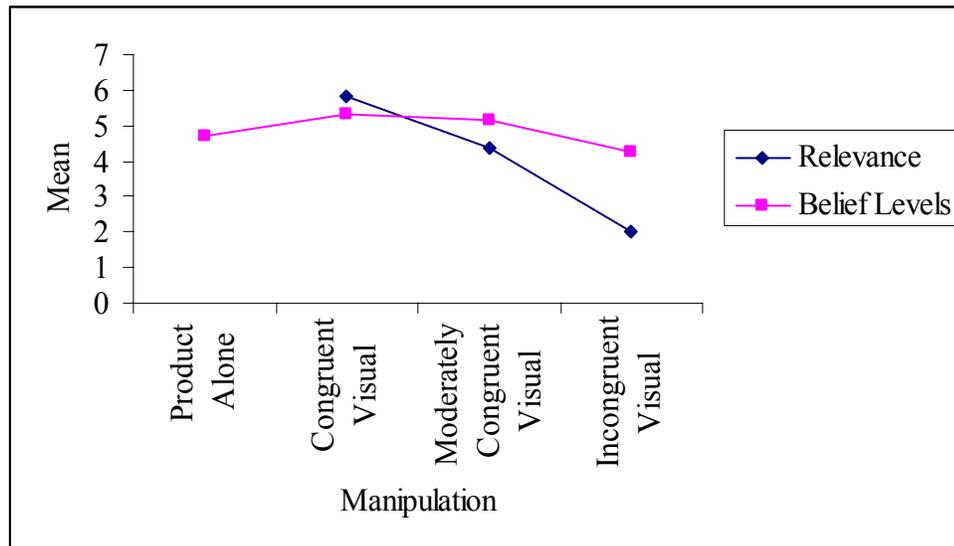
Cognitions	Mean	Std Dev	Std Error Mean	T	Df	Sig. (2-tailed)
Visual	1.70	.88641	.12536	5.098	49	.000*
Product	.8800	.68928	.09749			

\* significant at the .05 level.

Hypothesis 6. This hypothesis stated belief levels about product attributes for an advertisement with a congruent visual will be positively correlated with relevance.

Hypothesis 6 was supported. Belief levels about product attributes were significantly correlated ( $r=.340$ ,  $p=.007$ ) with relevance (Figure 4)

Figure 4 - Study II: Relevance and Aggregate Belief Levels



Hypothesis 7. This hypothesis stated that the total number of thoughts will have no correlation with the level of relevance for the congruent visual condition. Hypothesis 7

was supported. There was not a significant correlation ( $r=-.065$ ,  $p=.617$ ) between the total number of thoughts and the level of relevance for the congruent visual condition.

Hypothesis 8. This hypothesis says the number thoughts about the product will be positively correlated with relevance in an advertisement with a congruent visual. This hypothesis was not supported. There was not a significant correlation ( $r=-.021$ ,  $p=.870$ ) between the number of cognitions about the product and the level of relevance.

Hypothesis 9. This hypothesis says the total number of thoughts will be positively correlated with relevance for an advertisement containing an incongruent visual. This hypothesis was not supported. There was not a significant correlation ( $r=-.056$ ,  $p=.714$ ) between the total number of cognitions and the level of relevance.

Hypothesis 10. This hypothesis posited that belief levels about product attributes for the advertisement containing an incongruent visual will not be positively correlated with relevance. Hypothesis 10 was not supported at the aggregate level but supported for six product attributes at the individual levels. Belief levels were significantly correlated ( $r=.316$ ,  $p=.033$ ) at the aggregate level with relevance. Those individual product attributes not correlated with relevance (Table 19) were: *The soft drink smells fresh* ( $r=.286$ ,  $p=.054$ ), *The soft drink smells like an orange* ( $r=.104$ ,  $p=.490$ ), *The soft drink smells fruity* ( $r=.223$ ,  $p=.136$ ), *The soft drink tastes like an orange* ( $r=.224$ ,  $p=.135$ ), *The soft drink tastes fresh* ( $r=.154$ ,  $p=.308$ ), and *The soft drink tastes fruity* ( $r=.231$ ,  $p=.123$ ).

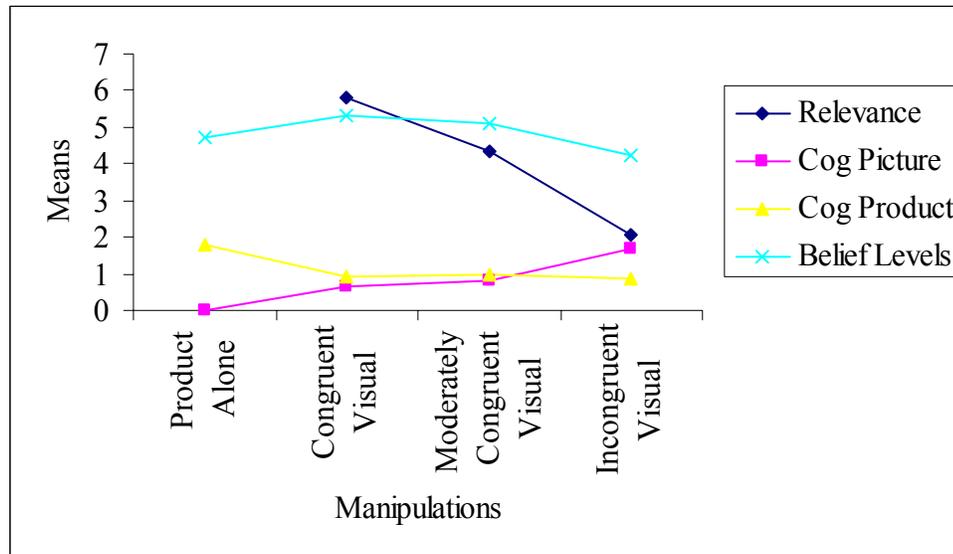
Table 20 - Study II: Correlations of Individual Belief Levels and Relevance

Soft Drink Belief	Relevance Congruent Visual	Relevance Incongruent Visual
Smells Fresh	r=.204 (p=.111)	r=.286 (p=.054)
smells like an orange	r=.184 (p=.153)	r=.104 (p=.490)
smells fruity	r=.117 (p=.364)	r=.223 (p=.136)
tastes sweet	r=.320* (p=.012)	r=.352* (p=.016)
tastes like an orange	r=.345* (p=.006)	r=.224 (p=.135)
Tastes fresh	r=.251 (p=.051)	r=.154 (p=.308)
Tastes fruity	r=.300* (p=.018)	r=.231 (p=.123)
Refreshing	r=.317* (p=.012)	r=.307* (p=.038)
Quench thirst	r=.367* (p=.003)	r=.501* (p=.000)

\*significant at the .05 level.

Hypothesis 11. This hypothesis states the number of thoughts about the visual will be positively correlated with relevance for an advertisement containing an incongruent visual. This hypothesis was not supported. There was not a significant correlation ( $r=-.080$ ,  $p=.597$ ) between the number of thoughts about the visual and the level of relevance for the incongruent visual condition.

Figure 5 - Study II: Relevance, Number of Thoughts, and Belief Levels



Hypothesis H12a: This hypothesis states that for the incongruent visual, relevance will be lower than the moderately congruent visual. This hypothesis was supported. Relevance was significantly lower ( $F(2,158)=93.431, p=.000$ ) for the incongruent visual (mean=2.0399,  $p=.000$ ) when compared to the moderately congruent visual condition (mean= 4.3459,  $p=.000$ ).

Hypothesis 12b. This hypothesis says that relevance for the incongruent visual condition will be lower than the congruent visual condition. This hypothesis was supported. Relevance was significantly lower ( $F(2,158)=93.431, p=.000$ ) for the incongruent visual (mean=2.0399,  $p=.000$ ) when compared to the congruent visual (mean=5.8065,  $p=.000$ ).

Hypothesis 13a. Hypothesis 13a posits that relevance for the moderately congruent condition will be higher than relevance for the incongruent condition.

Hypothesis 13a was supported. Relevance was significantly higher ( $F(2,158)=93.431$ ,  $p=.000$ ) for the moderately congruent visual (mean=4.3459,  $p=.000$ ) than relevance for the incongruent condition (mean=2.0399,  $p=.000$ ).

Hypothesis 13b. Hypothesis 13b states that relevance for the moderately congruent visual will be lower than relevance for the congruent condition. Hypothesis 13b was supported. Relevance was significantly lower ( $F(2,158)=93.431$ ,  $p=.000$ ) for the moderately congruent visual (mean=4.3459,  $p=.000$ ) than relevance for the congruent visual (mean=5.8065,  $p=.000$ ).

Hypothesis 14a. Hypothesis 14a states that relevance for the congruent visual will be higher than relevance for the moderately congruent visual. This hypothesis was supported. Relevance was significantly higher ( $F(2,158)=93.431$ ,  $p=.000$ ) for the congruent visual (mean=5.8065,  $p=.000$ ) than relevance for the moderately congruent visual (mean=4.3459,  $p=.000$ ).

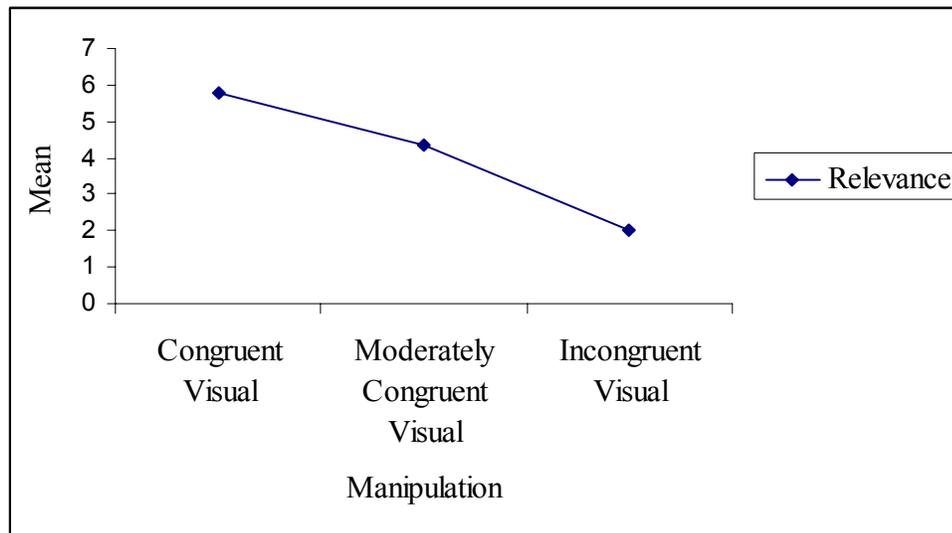
Hypothesis 14b. Hypothesis 14b states that relevance for the congruent visual will be higher than relevance for the incongruent visual. Hypothesis 14b was supported. Relevance was significantly higher for the congruent visual (mean=5.8065,  $p=.000$ ) than relevance for the incongruent visual (mean=2.0399,  $p=.000$ ). See table 21 for results of hypotheses 12a, 12b, 13a, 13b, 14a and 14b.

Table 21 - Study II: Comparisons of Relevance

Manipulation	Mean	Std. Dev	Std. Error	Mean Difference Comparisons		
				Congruent Visual	Moderately Congruent Visual	Incongruent Visual
Congruent Visual	5.8065	1.25856	.15984	-	1.46054* (p=.000)	3.76660* (p=.000)
Moderately Congruent Visual	4.3459	1.63621	.22475	-1.46054* (p=.000)	-	2.30606* (p=.000)
Incongruent Visual	2.0399	.1.34632	.19850	-3.76660* (p=.000)	-2.30606* (p=.000)	-

\*significant at the .05 level.

Figure 6 - Study II: Relevance



Hypothesis 15a. This hypothesis stated that attitude toward the advertisement will be higher for the congruent visual than the incongruent visual. This hypothesis was supported. Attitude toward the advertisement ( $F(3,208)=6.050, p=.001$ ) was significantly higher for the congruent visual (mean=3.875,  $p=.007$ ) than for the incongruent visual (mean=2.7283,  $p=.007$ ).

Hypothesis 15b. This hypothesis stated that attitude toward the advertisement will be higher for the congruent visual than the moderately congruent visual. This hypothesis was not supported. Attitude toward the advertisement was not significantly higher ( $F(3,208)=6.050, p=.001$ ) for the congruent visual (mean=3.875,  $p=.91$ ) than the moderately congruent visual (mean=3.8255,  $p=.91$ ).

Hypothesis 15c. This hypothesis stated that attitude toward the advertisement will be higher for the moderately congruent visual than for the incongruent visual.

Hypothesis 15c was supported. Attitude toward the advertisement was significantly higher ( $F(3,208)=6.050, p=.001$ ) for the moderately congruent visual (mean=3.8255,  $p=.003$ ) than for the incongruent visual (mean=2.7283,  $p=.003$ ). See table 22 for the results of hypothesis 15a, 15b, and 15c.

Table 22 - Study II: Comparisons of Attitude toward the Advertisement

Manipulation	Mean	Std. Dev	Std. Error	Mean Difference Comparisons		
				Congruent Visual	Moderately Congruent	Incongruent Visual
Congruent Visual	3.8750	1.47364	.18715	-	.04953 ( $p=.910$ )	1.14674* ( $p=.001$ )
Moderately Congruent V	3.8255	1.64345	.22575	-.4653 ( $p=.910$ )	-	1.09721* ( $p=.003$ )
Incongruent Visual	2.7283	1.37318	.20246	-1.14674* ( $p=.001$ )	-1.09721* ( $p=.003$ )	-

\*significant at the .05 level.

Hypothesis 16a. This hypothesis states that Attitude toward Product will be higher for the congruent visual than the incongruent visual. This hypothesis was supported. Attitude toward Brand was significantly higher ( $F(3,208)=6.591, p=.000$ ) for the congruent visual (mean=4.0419,  $p=.000$ ) than for the incongruent visual (mean=2.8391,  $p=.000$ ).

Hypothesis 16b. This hypothesis states that Attitude toward Product will be higher for the congruent visual than the moderately congruent visual. This hypothesis was not supported. Attitude toward Brand was not significantly higher ( $F(3,208)=6.591, p=.000$ ) for the congruent visual (mean 4.0419,  $p=.000$ ) than for the moderately congruent visual (mean=4.0566,  $p=.000$ ).

Hypothesis 16c. This hypothesis states that Attitude toward Product will be higher for the moderately congruent visual than the incongruent visual. This hypothesis was supported. Attitude toward Brand was significantly higher ( $F(3,208)=6.591, p=.000$ ) for the moderately congruent visual (mean 4.0566,  $p=.000$ ) than for the incongruent visual (mean=2.8391,  $p=.000$ ). See table 23 for the results of hypothesis 16a, 16b, and 16c.

Table 23 - Study II: Comparisons of Attitude toward Product

Manipulation	Mean	Std. Dev	Std. Error	Mean Difference Comparisons		
				Congruent Visual	Moderately Congruent Visual	Incongruent Visual
Congruent Visual	4.0419	1.53821	.19535	-	-.01467 ( $p=.921$ )	1.20281* ( $p=.001$ )
Moderately Congruent Visual	4.0566	1.70175	.23375	.01467 ( $p=.921$ )	-	2.30606* ( $p=.000$ )
Incongruent Visual	2.8391	1.47128	.21693	-1.20281* ( $p=.001$ )	-2.30606* ( $p=.000$ )	-

\*significant at the .05 level.

Hypothesis 17a. This hypothesis states that Purchase Intention will be higher for the congruent visual than the incongruent visual. Hypothesis 17a was supported.

Purchase intention was significantly ( $F(3, 204)=5.248, p=.002$ ) higher for the congruent visual (mean=3.1933,  $p=.003$ ) than the incongruent visual (mean=2.0955,  $p=.003$ ).

Hypothesis 17b. This hypothesis states that Purchase Intention will be higher for the congruent visual than the moderately congruent visual. This hypothesis was not supported. Purchase Intention was not significantly higher for the congruent visual (mean 3.1933,  $p=.941$ ) than for the moderately congruent visual (mean=3.1472,  $p=.941$ ).

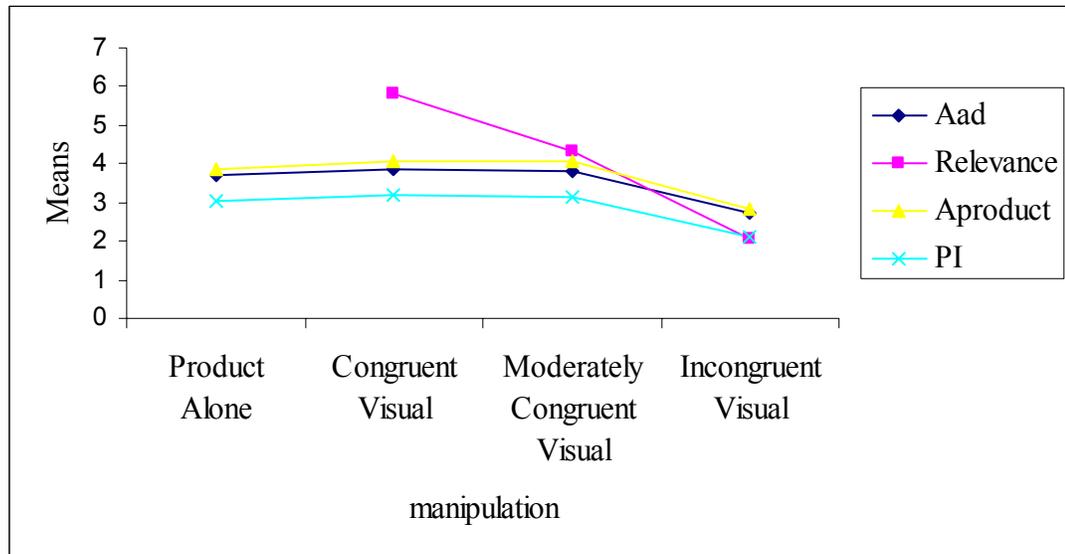
Hypothesis 17c. This hypothesis states that Purchase intention will be higher for the moderately congruent visual than the incongruent visual. This hypothesis was supported. Purchase intention was significantly higher for the moderately congruent visual (mean=3.1472,  $p=.006$ ) than for the incongruent visual (mean=2.0955,  $p=.006$ ). See table 24 for the results of hypothesis 17a, 17b, and 17c.

Table 24 - Study II: Comparisons of Purchase Intention

Manipulation	Mean	Std. Dev	Std. Error	Mean Difference Comparisons		
				Congruent Visual	Moderately Congruent Visual	Incongruent Visual
Congruent Visual	3.1933	1.66192	.21455	-	.04616 ( $p=.941$ )	1.09788* ( $p=.003$ )
Moderately Congruent Visual	3.1472	1.49931	2.0595	-.04616 ( $p=.941$ )	-	1.05172* ( $p=.006$ )
Incongruent Visual	2.0955	1.34786	.20320	-1.09788* ( $p=.003$ )	-1.05172* ( $p=.006$ )	-

\*significant at the .05 level.

Figure 7 - Study II: Relevance, Aad, AProduct and PI



Hypothesis 18. This hypothesis states that the level of relevance will have a positive association with attitude toward the advertisement. This hypothesis was supported. The level of relevance was significantly correlated ( $r=.513$ ,  $p=.000$ ) with attitude toward the advertisement.

Hypothesis 19. This hypothesis stated that the level of relevance will have a positive association with attitude toward the product. This hypothesis was supported. The level of relevance was significantly correlated ( $r=.558$ ,  $p=.000$ ) with attitude toward the product.

Hypothesis 20. This hypothesis says that the level of relevance will have a positive association with purchase intention. This hypothesis was supported. The level of relevance was significantly correlated ( $r=.435$ ,  $p=.000$ ) with purchase intention. See table 25 and Figure 7 for results of Hypotheses 18, 19 and 20.

Table 25 - Study II: Correlations for Relevance, Aad, AProduct, and PI

	Relevance	Attitude Toward Ad	Attitude toward Product	Purchase Intention
Relevance	1.00			
Attitude Toward Ad	.513*	1.00		
Attitude toward Product	.558*	.848*	1.00	
Purchase Intention	.435*	.773*	.793*	1.00

\*p<.01

#### Summary

The testing of these hypotheses accomplished the objectives established in this dissertation. These empirical examinations of relevance provide much needed information for the literature in the domain of consumer behavior as well as practitioners in the field of advertising. A summary report of Study II's hypotheses is presented below. Discussion of these results is found in Chapter V.

Table 26 - Summary Report of Study II Hypotheses

Hypothesis	Results
H1: Belief levels about product attributes for the congruent visual (visual is congruent with the product in an advertisement), will be greater than those for an advertisement without a visual.	Supported
H2: For the congruent visual, the number of cognitions about the product will be greater than the number of cognitions about the visual.	Not Supported
H3: The number of total cognitions will be greater for the incongruent visual (the visual is not congruent with the product in an advertisement) than the number of total cognitions for the congruent visual.	Not Supported
H4: Belief levels will not be a significantly different between the incongruent visual and the advertisement without a visual.	Supported
H5: For the incongruent visual, the number of cognitions about the visual, will be greater than the number of cognitions about the product.	Supported
H6: For the congruent visual, belief levels about product attributes will be positively associated with relevance.	Supported
H7: For the congruent visual, the average number of total cognitions will have no association with relevance.	Supported
H8: For the congruent visual, the number of cognitions about the product will have a positive association with relevance.	Not Supported
H9: For the incongruent visual, the number of total cognitions will be positively associated with relevance.	Not Supported
H10: For the incongruent visual, belief levels will have no association with relevance.	Not Supported (Aggregate level) Supported (Individual level)
H11: For the incongruent visual, the number of cognitions about the visual will have a positive association with relevance.	Not Supported
H12a: Relevance will be lower for the incongruent visual, than for the moderately congruent visual.	Supported
H12b: Relevance will be lower for the incongruent visual than for the congruent visual.	Supported
H13a: Relevance will be higher for the moderately congruent visual than for the incongruent visual.	Supported

Table 26, Continued - Summary Report of Study II Hypotheses

Hypothesis	Results
H13b: Relevance will be lower for the moderately congruent visual than for the congruent visual	Supported
H14a: Relevance will be higher for the congruent visual than for the incongruent visual.	Supported
H14b: Relevance will be higher for the congruent visual than for the moderately congruent visual.	Supported
H15a: Attitude toward the advertisement will be higher for the congruent visual than for the incongruent visual	Supported
H15b: Attitude toward the advertisement will be higher for the congruent visual than for the moderately congruent visual.	Not Supported
H15c: Attitude toward the advertisement will be higher for the moderately congruent visual than for the incongruent visual.	Supported
H16a: Attitude toward the product will be higher for the congruent visual than for the incongruent visual	Supported
H16b: Attitude toward the product will be higher for the congruent visual than for the moderately congruent visual.	Not Supported
H16c: Attitude toward the product will be higher for the moderately congruent visual than for the incongruent visual.	Supported
H17a: Purchase intention will be higher for the congruent visual than for the incongruent visual	Supported
H17b: Purchase intention will be higher for the congruent visual than for the moderately congruent visual.	Not Supported
H17c: Purchase intention will be higher for the moderately congruent visual than for the incongruent visual.	Supported
H18: Relevance will be positively associated with attitude toward the advertisement.	Supported
H19: Relevance will be positively associated with attitude toward product.	Supported
H20: Relevance will be positively associated with purchase intention.	Supported

## CHAPTER V

### DISCUSSION AND IMPLICATIONS

Chapter V presents discussions and implications emanating from this research. This chapter is organized in the following way. The first section of the chapter presents and reviews the research questions and goals identified in Chapter I. The second section provides answers to each of these questions through discussion of the findings generated from Study I and Study II. A third section explores managerial implications from the findings. The fourth section demarcates limitations of Studies I and II. The last section explores directions for future study.

#### The Research Questions and Goals

This dissertation proposed three research questions:

- 1) How is relevance for symbolic visuals used in advertisements defined in the literature?
- 2) What role does relevance play in relation to consumer responses of symbolic visuals in advertisements?
- 3) To what extent does the theory of relevance account for consumers' interpretations of symbolic visuals in an advertisement?

This dissertation proposed four main goals:

- 1) Clarify the definition of relevance.
- 2) Uncover why visuals used in advertisements that appear unrelated to the product produce effects that are only expected for visuals related to the product.
- 3) Examine the relationship between relevance and specific consumer responses.

- 4) Apply a theory of relevance to consumers' interpretation of symbolic visuals in an advertisement.

### *Question 1*

How is relevance for symbolic visuals used in advertisements defined in the literature? The literature review in this dissertation revealed that relevance has been used in a variety of ways, from a simple concept (Mitchell and Olson 1981) to a complex theory (Phillips 1997; Stafford, Spears and Hsu 2003). The use of relevance in the literature can be categorized into three broad categories of 1) subjective relevance 2) objective relevance, and 3) contextual relevance.

Subjective relevance is when an object in an advertisement is important to the individual. Subjective relevance is similar to the individual involvement (Petty and Cacioppo 1979) with an advertisement, visual, product or combination of them. Both concepts of subjective relevance and involvement attempt to describe the level of interest or importance placed on objects by the individual. According to subjective relevance, the more interest a person holds for an object the more relevant it is to them.

Objective relevance appears to be the most common in the literature with many researchers using it in some form or another (Houston, Childers and Heckler 1987; Unnuva and Bunkrant 1991; McQuarrie and Mick 1992). Objective relevance is when an object in an advertisement has a close logical connection to the product. This close logical connection is usually thought to mean the visual and product share many common attributes. According to researchers who use objective relevance, the more attributes a visual share with an object the more relevant it becomes.

Contextual relevance is when a visual in an advertisement is connected to the product as a result of the context of the advertisement itself. This connection is independent of whether or not they are logically connected outside the advertisement. Contextual relevance is considered in this study to be the most effective representation of relevance. Few authors have used a contextual relevance definition in their study of advertising visuals (i.e. Ang and Low 2000; Lee and Ang 2003; Stafford, Spears and Hsu 2006; Wang 2006) and fewer still attempt to test a theory of contextual relevance empirically.

Since no one has attempted to generate a definition and measurement of relevance that could encompass all three categories, Goal 1 of clarifying the definition of relevance was proposed in this dissertation. Sperber and Wilson's (1995) Theory of Relevance (TOR) was used as the theoretical foundation for the definition of relevance. A definition for relevance is a meaningful interpretation of a connection between two or more objects in a context. To measure this meaningful interpretation, a scale of relevance was developed in Study I.

The scale developed in Study I shows that relevance is clearly more than a personal interest in an object or if two object share similar attributes. Relevance relies on a context which may provide enough information about the linkage between objects that individuals can arrive at a meaningful interpretation. The relevance scale is designed to measure this interpretation regardless of how it is achieved. While common attributes and involvement may provide information for an interpretation, measuring these concepts without consideration of a context will undoubtedly lead to errors. The relevance scale

measures the connection of objects inside a context and therefore can detect differing levels of relevance in various contexts. This provides a solution to past researchers who measure only an objective or subjective aspect of relevance and could not find a stable measure of relevance. The relevance scale here is a much improved measurement that should be used by researchers in future studies.

### *Question 2*

What role does relevance play in relation to consumer responses of symbolic visuals in advertisements? When consumers see advertisements containing a product with a congruent visual then they tend to focus on existing easily identifiable attributes about the product. Since these attributes are readily available in the mind of the viewer, it is relatively easy to understand why each object is in the advertisement and what message the advertiser is attempting to say. Individuals will tend to find congruent visuals to be highly relevant since it takes little effort to understand the advertisement.

Existing belief levels about the product attributes held a surprising relationship with relevance for advertisements with incongruent visuals. It was expected for advertisements with incongruent visuals; existing product attributes would have to be abandoned for new thoughts to develop a meaningful interpretation or relevance. Instead, a significant positive relationship was found between beliefs individuals feel for existing product attributes and relevance. It appears if an individual feels that an incongruent visual in an advertisement is relevant then easily identifiable product attributes are strengthened. Individuals may not have to seek new ideas other than literal thoughts about the product for an advertisement containing an incongruent visual to

produce a meaningful interpretation of the connection. Since the individual feels incongruent objects in the advertisement are relevant, then their literal beliefs about the product are stronger since it is these beliefs they are using to understand the advertisement. Conversely, it appears individuals who could not understand the connection between objects using only literal product attributes and did not expend the effort to think of additional ideas will probably find the connection irrelevant.

An alternate explanation could be if individuals generate new metaphorical thoughts, literal beliefs are strengthened because relevance also held a positive relationship with the number of thoughts about an incongruent visual. It appears consumers have to focus on an incongruent visual for it to become relevant. These thoughts may be metaphorical since the consumer is thinking about the visual and what type of connection it has with the product (Phillips 1997). If an individual generates few thoughts about the incongruent visual then the context of the advertisement has not generated the environment needed for a meaningful interpretation.

Congruent visuals require little thought because the meaning is literal and direct. Therefore few total thoughts about the advertisement in general were assumed for relevance to occur. Thus it appears the relevance is easier to achieve with a congruent visual than for an incongruent visual. The number of cognitions overall did not show much support for a relationship with relevance since there was not a significant difference in the number of thoughts for any level of congruence. This lack of findings may have been due to an experimental procedure rather than lack of a proper theoretical

conceptualization. This confound is discussed in detail in the limitation section of this chapter.

Relevance is positively correlated with consumers' attitude toward the ad, attitude toward the product, and purchase intention. The results indicate that if consumers understand an advertisement and can interpret how objects in the ad are connected, they are likely to hold positive feelings for the ad, the product, and intend to purchase. Conversely, if a meaningful interpretation cannot be reached, then consumers' will hold a less favorable attitude toward the ad, the product, as well as being less intent on purchasing the product. This study strongly suggests that relevance plays an important role in the persuasive power of print advertisements.

### *Question 3*

To what extent does the theory of relevance account for consumers' interpretations of visuals in an advertisement? The results of this study indicate the more congruent a visual is with a product the more relevant it is. This is evidenced by the fact that the congruent visual was rated as the most relevant, the moderately congruent visual next, and finally the incongruent visual as the least relevant. This does not mean that moderately congruent visuals or incongruent visuals can always be considered irrelevant. It simply suggests more effort is involved for consumers to interpret a visual that holds few or no similar attributes as the product. TOR posits an inverse relationship between effort to acquire a meaningful interpretation and relevance (Sperber and Wilson 1995). This implies more incongruent objects require more effort to acquire an interpretation

thus lowering the measure of relevance. Relevance is also not a condition that is either present or absent, but it is a concept with varying degrees of existence.

Recall, however, that the context provides information which in turn reduces effort, making simple connection of dissimilar objects possible. This is demonstrated by the fact that participants felt a fairly high level of relevance for the moderately congruent visual of the beach scene. Miniard, Bhatla, Lord, Dickson and Unnava (1991) could not understand why this particular visual seemed to be relevant in the advertisement, when it was rated as incongruent in pre-tests. This study reveals that participants could rather easily interpret the moderately congruent visual making it relevant in the advertisement regardless of its congruence outside the context. This explains why Miniard, Bhatla, Lord, Dickson and Unnava (1991) experienced confusion about why a visual might not be relevant in one context and relevant in another.

Overall general support was found for TOR. Belief levels were higher for congruent visuals, implying that assumptions were more intense contributing to high level of relevance. Individuals generated a high number of thoughts about the incongruent visual suggesting new assumptions were being used. TOR did not predict that thoughts about the incongruent visual seemed to impact existing assumptions rather than using new assumptions to achieve relevance. However, TOR as an understanding of a connection in advertising is shown in this dissertation to be an important theory in marketing.

## Theoretical Implications

Since no comprehensive attempts have been made to study TOR empirically, the findings make considerable contribution to the body of knowledge. Several theoretical implications about TOR have been made as a result of this study. First, TOR posits existing assumptions about objects should strengthen as they become relevant. This study demonstrated that existing assumptions in the form of beliefs about product attributes were positively correlated with relevance for advertisements containing congruent visuals. This finding supported TOR in its prediction that one way individuals find objects relevant is through strengthening of assumptions.

Second, TOR articulates when new assumptions are generated about objects then relevance is achieved. New assumptions were expected to be the primary driver of relevance for incongruent visuals since it was understood that individuals would find it difficult to think of existing assumptions about the link between visual and product. This study failed to find support for this TOR prediction. When total number of thoughts about the advertisement was examined no significant difference could be found between congruent and incongruent visuals. When thoughts about the visual were examined independently, individuals generated more thoughts about the incongruent visual than the product. Nevertheless, these thoughts about the incongruent visual were not significantly correlated with relevance, implying that new assumptions did not generate relevance. It is the researcher's opinion, however, that lack of support for new assumptions does not suggest TOR is an inaccurate theory; rather it was a limitation of the experimental process. This limitation is described later in the limitations section of this chapter.

One finding mentioned previously, is that existing assumptions were strengthened as relevance increased for the incongruent visual. In this instance, new assumptions were expected to generate relevance rather than strengthening of existing assumptions. This may suggest that existing assumptions and new assumptions are not mutually exclusive but may work together in harmony when individuals try to make sense of incongruent visuals. It may also suggest that if new assumptions are found, then individuals may use these new assumptions to influence existing assumptions about the product. Further testing is necessary because of confounds limiting this study to record significant findings for new assumptions.

Support has also been found in this study for TOR as superior to existing uses of subjective and objective relevance. Relevance as defined by TOR encompasses both subjective and objective aspects through the use of context. Subjective relevance can explain a meaningful interpretation of a connection between an object and a visual if an individual is highly involved with a product. However, subjective relevance cannot explain why a visual is relevant when the viewer is uninterested in the product. TOR provides an explanation for why a visual can be relevant for any involvement level due to contextual information.

This study also provides evidence that TOR better explains relevance than objective relevance. Objective relevance as used in the congruency literature (Hecklers and Childer 1992), the celebrity endorsement and branding literature (Kalhe and Homer 1985) and the attitude literature (Miniard, Bhatla, Lord, Dickson and Unnava 1991; Mitchell and Olson 1981) cannot explain non-objective relevance. This study suggests

TOR can explain why relevance can occur when the link between visual and product are non-objective.

The Miniard, Bhatla, Lord, Dickson and Unnava (1991) study was replicated and extended in this study specifically to demonstrate the merits of TOR. Miniard, Bhatla, Lord, Dickson and Unnava (1991) hypothesized that a visual that held no common assumptions with a product would not be relevant and therefore would not have an impact on responses such as Purchase Intention. Mitchell and Olson (1981) made similar predictions in their study. These studies found visuals that did not meet the criteria of objective relevance were still found to be relevant in the context of an advertisement. Both of these studies expressed surprise when “irrelevant” visuals were found to be relevant by respondents. Mitchell and Olson (1981) suggested that classical conditioning could have accounted for the change from irrelevant to relevant. This dissertation took careful steps to eliminate the effects of classical conditioning and found relevance for visuals that did not exhibit objective relevance outside the advertising context. Therefore, this study suggests that Miniard, Bhatla, Lord, Dickson and Unnava (1991) and Mitchell and Olson (1981) were incorrect in their assessment because they were using an incomplete representation of relevance. They measured relevance only in terms of commonalities between visual and product. Visuals used in the aforementioned studies were relevant because the context of the advertisement helped individuals understand why they were linked to the product. If Miniard, Bhatla, Lord, Dickson and Unnava (1991) and Mitchell and Olson (1981) had used the measure of relevance

developed in this dissertation from TOR, then it is quite possible they would have understood why relevance changed in differing contexts for the same visual.

Advertising researchers continue to use the term relevance without proper conceptualization. For example, Rapaport (2007) argues that various advertising models are based on relevance, but he does not define the term, nor suggests a proper measure. Discussions held at a recent 2008 Advertising Academy Conference held in California called for the clarification of the relevance construct. This dissertation provides much needed clarification of relevance as well and a proper measure that advertising researchers should start using immediately. There is little doubt the relevance scale and empirical testing of TOR developed in this dissertation is a much needed contribution to the advertising and consumer behavior fields.

#### Managerial Implications

Findings of this study suggest that relevance should be an important consideration when designing advertisements. If consumers are unable to understand why a product and visual are placed in an advertisement then they are less likely to act upon it. If consumers understand the ad then they will hold a higher propensity or intention to purchase the promoted product. Thus, an emphasis must be placed on designing advertisements with the target market's interpretation in mind.

Advertising managers must understand that while congruent visuals are likely to be viewed as relevant, they need not imply that only congruent visuals should be used. Visuals less congruent with a product but relevant inside the context of the advertisement could be used to create interest with positive results. Some groups of consumers that are

likely to make a positive interpretation of a highly incongruent visual like the X-Centric fish and cologne example, may warrant the use of such visuals. The important concern for marketing managers and advertising executives is to ensure that consumers grasp a high level of relevance for the connection between product and visual.

The relevance scale developed in this study will help managers determine the level of relevance for products and visuals in designing advertisements. Advertising managers could produce several mock advertisements with various visuals, let a focus group view them and then allow respondents to complete a questionnaire containing the relevance scale. Those advertisements that are ranked as being highly relevant are more likely to produce desired results.

This study will help advertising managers produce more effective communication through advertising. Advertising is a form of communication about products and services from companies to prospective buyers. This communication must be understood by these potential buyers to be effective. Most people can attest to occasionally viewing an advertisement that they did not understand. As a result, the advertisement would not seem relevant regardless of overlapping assumptions between visuals and product or the involvement level of the viewer. If a meaningful interpretation is not reached, then this study suggests that consumer response is diminished. Thus, advertising managers are constantly striving to produce advertising messages that are understood in the way they are intended. By using the relevance scale developed in this dissertation, advertising managers can ensure that consumers are finding a meaningful interpretation from companies' advertisements.

The findings about TOR can help managers use a superior representation of relevance. Instead of using objective or subjective relevance to combine images in advertisements, they could use TOR as way to develop truly relevant advertisements. Managers could gain a sustainable competitive advantage by applying TOR as demonstrated in this study to develop advertising effectiveness.

### Limitations

Extreme care was taken in this dissertation to reduce error, but as with any study there are a few limitations. First, few hypotheses dealing with cognitions were supported. It is felt the way cognitions were recorded may have confounded the results. The cognitions were recorded in a manner consistent with Wheeler, Petty and Bizer (2005) with 10 boxes on a single sheet of paper to record cognitions. This method helps participants to organize their thoughts and helps them produce one distinct thought per box. This method produced concerns. While some participants produced more than 10 thoughts, most limited themselves to just 10. Many participants tried to produce at least 10 thoughts in an attempt to fill in all boxes. Thus, the true number of thoughts may not have been accurately produced because participants were primed for a specific number of thoughts.

Another issue in conjunction with recording cognitions may have come from the large groups of participants in the experiments. The experiments were conducted in two large classrooms of 84 students and 132 students, respectively. Since the cognition sheet was administered separately from the questionnaire, the students had to wait until everyone was through recording cognitions. The primary investigator observed that

students who received the cognition sheets prior to most students appeared to continue to write down thoughts simply to pass the time. Students who received the cognition sheet after most students had received them appeared to feel pressure to finish their cognitions as quickly as possible. When this was observed it looked as if students would record fewer thoughts than if they had not felt this pressure. Undoubtedly these unexpected time extensions and pressures produced errors in the recording of cognitions.

Future studies involving cognitions as a dependent variable should address these issues. It appears that if experiments were administered to smaller groups of participants, say 50 or less, many of these problems may disappear.

Another limitation is the design of the advertising manipulations themselves. They were designed in such a way to isolate the visual and product without any other influences. While this was effective in observing these effects, it reduced the believability of the advertisement. Many thoughts were recorded about how the advertisement looked cheap and unprofessional. This was unintentional but in an attempt to isolate the objects in the advertisement; a basic design was the result. Future studies may want to use more exciting ads. More text may need to be added to complete the illusion of a professional advertisement. This was not a limitation for the scale development because actual advertisements were used.

A final limitation was generalizability of the study. While homogeneous sample is desirable for theory testing, researchers applying this study to other populations may need to proceed with caution. Future research may need to explore relevance beyond the samples used in Studies I and II.

### Future Studies and Research Directions

Future research could ensue in many areas. First, a study could explore the issue of involvement and how much impact this variable may have on relevance. Other work could carefully look at cognitions and relevance. This study, as stated earlier, did not see expected results of cognitions due to errors produced by administration of the experiment. Future researchers could administer the cognitions utilizing different cognition sheet design and smaller experimental groups. Cognitions could also be coded into other categories such as literal and metaphorical. While counting the number of thought about the product and about the picture were appropriate, other types of coding may produce more interesting results.

Future researchers could apply similar experiments to other populations. It would be interesting to see if relevance changes for demographic variables such as age, income, etc. Heavy product users could be separated from light users to see if this is related to involvement and relevance.

Researchers could explore the Theory of Relevance in general. It would be interesting to see if the relevance scale could apply to television advertising, internet advertising, and radio advertising, just to name a few areas. The relevance scale also could be adapted to measure relevance between two objects other than a product or a visual.

Future research could also look at various types of products. This study only looked at soft drinks, but could be expanded to other products such as expensive products, services, and even business to business products. Much needed information

could be provided if relevance is tested on advertisements for various products to see what changes may take place.

Much could be gained if researchers in the areas of congruency, fit, and involvement used this conceptualization of relevance. While these fields have explored one dimension of relevance, TOR may shed new light in these literature streams. For example, congruency theorists may want to explore if the perception of congruency changes with relevance under various contexts. Celebrity endorsement and branding literature could benefit from exploring relevance along with the match-up hypothesis to gain a better understanding of how individuals react to various promotions. Researchers may want to explore if individuals can develop meaningful interpretations of pairing celebrities or branding with various products.

Researchers could also explore TOR in regards to internet searches and internet advertising. These domains often deal with objective relevance and rarely conceptualize TOR explored in this dissertation. The relevance scale and TOR quite possibly could shed new light on how individuals interpret internet search results as well as advertisements used on various web pages. The possibilities of applying TOR to this literature stream is quite interesting and could produce much needed research for years to come.

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