

# MEASURING THE EFFECTS AND EFFECTIVENESS OF INTERACTIVE ADVERTISING: A RESEARCH AGENDA

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**ABSTRACT:** Although interactive advertising is not new, its scale, scope and immediacy has increased substantially with the diffusion of new technologies such as the Internet. The growth of interactive advertising highlights the role of the consumer in the determining the effects and effectiveness of advertising, while challenging traditional assumptions about how advertising works. The active role of the consumer in determining the effects of advertising has important implications for how the effects and effectiveness of advertising are measured and how various measures are interpreted. The present paper offers a discussion of these issues and compares and contrasts traditional notions regarding the measurement of advertising effects with notions that recognize the active role of the consumer in interacting with advertising and the advertiser. Implications for future research are discussed.

The past decade has witnessed the development of information and communication technologies that enable easy and rapid interaction between customer and advertiser. As a result, advertisers are increasingly relying on various modes of interactive technology to advertise and promote their products and services. A new genre of advertising and marketing communications agencies has emerged, the interactive agency, even as more traditional advertising agencies have embraced interactive technologies. Expenditures for online advertising, only one form of interactive communication, doubled from 1998 to 1999 and are expected to reach \$ 21 billion by 2004 (Gilbert 2000). Although this will still be less than 10% of all advertising expenditures, there is reason to believe that this estimate underestimates the amount of advertising that is in reality interactive.

Although the Internet is widely heralded as a new medium for interactive communications (Hoffman and Novak 1996, Alba, Lynch, Weitz, Janiszewski, Lutz, Sawyer, and Wood 1997, Stewart and Zhao 2000), consumers have already begun to provide evidence that they have integrated the Internet experience into their broader media use. Almost half of all personal computers are in the same room as the television set, and simultaneous viewing of television and access to the Internet are common (Cox 1998). Such consumer directed integration of television and the Internet is but one example of interactivity involving the integration of media by consumers. Combinations of older media, such as traditional print and broadcast advertising with the telephone (especially, but not exclusively 800 telephone numbers) have long provided a degree of interactivity.

At the most general level, feedback via sales reflects interactivity. Interactivity is, therefore, a characteristic of the consumer, not a characteristic of the medium; consumers can choose to respond or not. Thus, in this sense interactivity is not really new. What is new, are the speed, scope, and scale of interactivity that is provided by new information and communication technologies. The Internet is a new technology that makes some things simpler, cheaper and easier. It is a new way to communicate with consumers, for consumers to communicate with one another, and a new way to sell products and services to consumers, but it joins other media and distribution channels as vehicles for these tasks. It does have some features, such as hyperlinks, that are different from those found in other media, but other media also have unique characteristics. The increasing technological integration of telephones and television with the Internet also suggests that interactive media, and hence, interactive advertising, are not unique to the Internet.

## The New Interactive Media

Cutler(1990) defines the new interactive media as media that provide the opportunity to instantaneously advertise, execute a sale, and collect payment. With the advent of the Internet and other technologies, the interaction between and among consumers and marketers is becoming increasingly more pronounced. Consumers can collect and provide information by searching and navigating through commercial Web sites, they can post and customize their preferences, and they can communicate with other consumers as well as product and service providers. Similarly, marketers can use information obtained from consumers to customize their advertisement messages, to segment their audiences, to facilitate consumer

search for selected types of information and products, and to collect information about consumers' preferences to improve future products and services. Moreover, marketers can potentially provide consumers with a more enjoyable experience by offering such services as information, entertainment, customer service and technical support through e-mail, Web sites, live operators, and soon via video-conferencing.

Use of interactive advertising through new media such as the Internet, also draws attention to the contrast between traditional assumptions about advertising and its effects and the realities of communication in the market place. Traditional approaches to advertising practice and research implicitly assume that advertising is something the firm does to the consumer. Interactive advertising makes it clear that this is a very limited view of advertising and highlights the need to understand what consumers do to advertising. The reasons consumers seek information, self-select information for attention, process and use information, and respond to information are critical for understanding the effects of advertising and for designing measures of advertising effectiveness in an interactive context. Self-selection of both the sources from which information may be obtained, and the way this information is processed, is an increasingly important determinant of consumer behavior. Market information systems that fail to consider the impact of customer control of information will, at best, be incomplete, and potentially misleading.

The productivity and contribution of advertising research during the past forty years is impressive. It has revealed much about human behavior and the influence of communication. Nevertheless, much of the research during the past fifty years has been conducted from the perspective that advertising acts on consumers to produce responses (or not). This perspective served the profession well when markets were growing, media outlets were few, and the opportunities for consumers to respond to advertising were limited. This is clearly no longer the case, at least in the major industrialized nations. Rather, markets for many products are now mature and exhibit little growth. There has been a proliferation of media outlets, which, in turn, has reduced consumers' attention to any one of these outlets. Increasingly customers have the opportunity to respond directly and immediately to advertising or to ignore it or block it out altogether. This means that the context in which advertising is used has fundamentally changed. In large measure, it is now the consumer who does something to or with advertising, not vice versa. In the future, measures of

advertising effects and effectiveness will need to explicitly recognize the more active role of the consumer in the communications process.

### **Objectives of Interactive Advertising**

In general, the goals of interactive advertising tend to be similar to the traditional objectives of advertising. This means that many of the traditional measures of advertising effectiveness remain relevant, even in a world of interactive media. However, interactive advertising also has some properties that expand the range of potential objectives and that facilitate the acquisition of traditional measures of advertising effectiveness. Interactive advertising also has the potential to lessen the 'process loss' associated with uncoordinated advertising, to reduce the difficulties commonly encountered in clearly communicating an advertising message and to help overcome resistance to new products.

At the same time, interactive advertising also has the potential to increase the efficiency and quality of consumers' decisions, increase customers' involvement and satisfaction, and promote trust through reciprocity in information exchange, technical assistance, and reduction of information asymmetry. Finally, marketers can use feedback from consumers to improve their advertising message and intended target, and strategically adjust their customer support, product line, and services provided. Interactive advertising may also produce greater efficiency, trustworthiness, and quality in advertising. Thus, interactive advertising has the potential to fundamentally change the nature of advertising in much the same way that electronic communication infrastructure has changed the nature of group interaction (Fulk and Boyd, 1991).

Interactive media of various types not only opens new opportunities for communication with and among consumers, it also creates opportunities for creating new measures of consumer response to such communications, as well as to product offerings and other marketing initiatives. Interactive media shift control of the information flow from the marketer to the consumer. This provides many more options for responding to information than previous forms of marketing communication, and it is the response of consumers to these options that provides the basis for new measures of consumer response. For example, providing consumers with the opportunity to search for more information about a product, as is done at many Internet sites, provides an opportunity to monitor the types of information and products that consumers seek at both an individual and aggregate level.

To illustrate the power of interactivity, consider the following scenario: a manufacturer of a product offers a description of a product concept. Information about this concept can be obtained by consumers in an interactive environment through an interactive search of various branching trees of information offering more and more detailed information about the product concept. Note that the intensity of search for information (measured by click through rate) can become a surrogate for interest in the product. Indeed, because such search involves deliberate and active decisions by the consumer, it is likely that measures of the breadth and depth of information search will be far better predictors of product interest and eventual purchase behavior than measures currently in use.

It is very likely that measures of intensity of information search bears a strong relationship to product interest and, in turn, to product purchase. Further, interactive media provide the opportunity for direct customer feedback regarding product modifications, likes and dislikes, and improvements. Evaluation of product concepts is but one potential opportunity for using the power of interactive media. By tracking the types of information users of interactive media seek it should be possible to determine the information that consumers find most useful when evaluating a product. Indeed, examination of the information search patterns of users of interactive media may inform positioning decisions. Information provided by the consumer to the marketer can provide a means for customized offers and customized advertising. Indeed, fully interactive advertising would provide the consumer with the opportunity to request information, not simply respond to what is provided by the advertiser.

While the potential of interactive media is clear, much remains to be done to realize that potential. For example, numerous measures of intensity of search for information (click-through rates) might be constructed which vary in their capacity to capture the depth and breadth of search. There is also the important issue of establishing a link between such measures and more traditional measures of purchase interest and intent. In addition, new issues arise in the context of interactive advertising that do not arise, at least to the same extent, in the context of traditional advertising.

For example, there is the question of whether and when consumers wish to be engaged by an interactive medium. There is also the question of how much information consumers are prepared to provide advertisers or even how much information consumers are prepared to allow marketers

to capture about the interaction. Finally, there are issues of satiation of response that arise in the context of measures based on interactive media that do not arise with more traditional measures. Consumers have only limited time and resources, and therefore, are unlikely to be able to sustain large numbers of on-going interactive relationships.

### **How Different Is Consumer Response to Advertising Using Interactive Media?**

Fundamental to any discussion of interactive advertising is the question of just how different it is from traditional advertising. Although the Internet, and other interactive media like interactive television, have been touted as more powerful, responsive, and customizable than traditional media (Port 1999, Novak and Hoffman 1996), the empirical evidence suggests that consumers respond to much of the advertising on the Internet in the same ways they respond to advertising in more traditional media, at least with respect to traditional measures of advertising effectiveness. For example, Drèze and Hussherr (1999) found response to advertising on the Internet to be similar to response to advertising in other media, except that advertising on the Internet appeared to be easier to ignore. Similarly, Lynch and Ariely (2000) found that consumers are less price sensitive when providers on the Internet offer different rather than identical products, a finding that directly parallels findings in more traditional retail settings.

Traditional measures of advertising effectiveness, such as recall, attitude change, and brand choice are only a part of the story of effectiveness of interactive advertising, however. Such measures are useful, but they are in the tradition of advertising research that focused on the advertising's influence on the consumer; these measures offer limited insight into what the consumer does to and with advertising. Research that begins with the perspective that advertising does something to consumers treats advertising as an independent variable and advertising response as the dependent variable.

The typical research paradigm involves a forced exposure to some advertising message followed by some measure of consumer response. If one accepts the proposition that people do things to and with advertising, the identity of independent and dependent variables is less obvious. Indeed, any response to advertising, including that of simply attending, may be contingent on a host of other factors. When people select that to which they attend, the act of attending becomes a powerful determinant of advertising response. The traditional paradigm for examining the effects and effectiveness of advertising has

served the profession well, but it is incomplete in an increasingly interactive context. This suggests that there is a need for a new paradigm for the measurement of advertising effects.

This new paradigm must explicitly recognize the active role of consumers; message recipients must also be potential message seekers. At the same time, any new paradigm must be compatible with the accumulated body of research and theory that has dominated the advertising discipline for more than fifty years. The focus of this new paradigm must also be interaction with information not merely response to information.

Further, there must be recognition that media are not inherently interactive. Media may offer the potential for interaction, but it is ultimately the consumer who determines whether interaction actually occurs, and thus, whether advertising is or is not interactive. Interactive advertising is characterized by what consumers do, not by what marketers do or by characteristics of media. This means that research on interactive advertising must focus more on the person receiving the advertising than on the advertising or the medium. Research in information systems, which has long focused on the interaction of people and information, provides a potential framework for reconceptualizing the measurement of advertising effects in a way that recognizes the active role of the consumer in determining whether interaction occurs.

#### **A New Theoretical Framework for Advertising Effectiveness**

Most scholars generally concede that the effects of advanced technologies are less a function of the technologies themselves, and more a function of how these technologies are adapted by people (DeSanctis and Poole, 1994). Thus, the effects and effectiveness of interactive advertising may differ from anticipated outcomes as consumers and marketers respond and adapt to changes in their own environments (Markus and Robey, 1988). This suggests that research on interactive advertising should focus on the dynamic processes by which consumers and marketers incorporate advanced technologies into their reciprocal communications. DeSanctis and Poole (1994) have proposed adaptive structuration theory, an extension of structuration theory (Giddens 1984), to explain the interplay between the structures of technology, relevant actors, and changes in technology and behavior that arise from such interplay.

For example, Poole and DeSanctis (1989) used structurational concepts to examine how groups appropriated the interaction

rules of their decision support systems, thereby structuring their group communications and reinforcing or modifying their systems' influence over time. Such an adaptive model may also be an appropriate conceptual framework for examining the effects and effectiveness of interactive advertising. Ongoing interaction between consumers and marketers may be conceived of as a special case of structuration. Structuration involves the production, reproduction, and transformation of social institutions, which are enacted through the interaction between individuals and institutions.

Application of structuration theory to interactive advertising would involve the identification of the ways in which consumers shape the production, reproduction, and transformation of the advertising message, future products and services and relationships with marketers and other consumers. This interaction can, in turn, shape the actions taken by advertisers. Structural concepts can be used to examine how marketers and consumers appropriate interaction rules to influence the effectiveness of advertising and other jointly beneficial outcomes. Following structurational terminology (Yates and Orlikowski, 1992), interactive advertising may be regarded as a social institution that is produced, reproduced, and modified when consumers engage in interactive communication. As a social institution, advertising both shapes and is shaped by consumer preferences.

#### **Approaches to Measurement**

From a structurational point of view, there are two broad sets of measures of advertising's effects and effectiveness. These two sets of measures are characterized by different, but complementary views regarding the role of interactive advertising. One set of measures focuses on media choice, information search, attention to and processing of information. Such measures treat interactive media as dependent variables and focus on the factors that influence the use of media and advertising. Consumers' values, goals, and purposes are among the focal constructs around which measures might be constructed. The emphasis of these measures is development of an understanding of the means by which human beings construct and control their own environments (Powers 1973, 1978). Thus, these measures might be conceptualized as reflecting the processes by which consumers seek to control their environments and fulfill their goals. Such measures might be descriptively labeled as control process measures.

The use of such measures in the design and modification of advertising messages has been referred to as the "market-back" approach to advertising (Stewart 1996). The second set of measures focuses on the effects of consumers' using interactive media. These measures focus on advertising as an independent or mediating variable that influences particular outcomes among message recipients. This latter set of variables includes such traditional measures of advertising response as awareness, recall, attitude, and product choice. Although the paradigm that gives rise to these measures appears at first brush to be consistent with traditional advertising research, it is not (Stewart 1992). Within an interactive context measures such as awareness, attitude, and product choice, among others, are not simply the result of exposure to advertising; they are also the result of choices made by the consumer, which are, in turn guided by the consumer's goals and purposes. Thus, though the measures may appear similar, the interpretation of these measures is rather different. These outcome measures are the joint product, or interaction, of the consumer and the advertising (Punj and Stewart 1983).

Structurational theory also suggests that the consumer alone cannot be the focus of measurement. The goals and intentions of the marketer and responses of the marketer to the communications and behaviors of consumers are also relevant. While traditional advertising research has long emphasized the criticality of specifying advertising objectives in the determination of the effectiveness of advertising, structurational theory suggests the need for examining how marketers' goals and objectives evolve over time in response to consumers' actions in the market place. A structurational view of interactive advertising suggests that there is a reciprocal and recursive relationship between interactive media and advertising effectiveness. Such an approach is especially useful for evaluating the evolution of advertising and advertising response over time and as a result of repeated interactions between marketers and consumers.

### CONTROL PROCESS MEASURES

Control process measures focus on when and with what consequences consumers and marketers choose to use particular interactive advertising media and advertising content. The focus of such measurement in an interactive advertising context is consumers' use of various media and desire for particular kinds of information toward the end of determining the appropriateness of various interactive media for different types of advertising under various other conditions. According to media richness theory, media may be

ranked on a continuum according to their capacity to provide immediate feedback, convey multiple cues, support personalization, and communicate complicated messages (Daft and Lengel, 1986; Daft et al., 1987).

Media that facilitate the immediate exchange of a wide range of communication cues are often regarded as rich media, while those that allow the exchange of a restricted range of such cues over a longer period are considered lean media (Short et al., 1976; Daft and Lengel, 1986). For instance, e-mail does not permit immediate feedback and is confined to written communication only. Video-conferencing permits consumers and advertisers to see and listen to each other and respond immediately to messages. Thus, characteristics of media, the richness of media, may be viewed as placing constraints on how consumers may respond, but response is still under the control of the consumer.

Nevertheless, the response of consumers to any particular communication must be interpreted within the context of the constraints imposed by a particular medium. It may also be the case, however, that consumer use particular media, and seek out advertising and other information in those media, for precisely the reason that they desire greater or lesser richness. A key issue for advertisers is identifying which advertisements are more appropriate for interactive media and which advertisements are better suited to traditional media. In addition, given that richer media also tend to impose greater cognitive and other costs on consumers, there is the question of what type of information consumers desire and the extent to which an advertising message is suited for a particular degree of media richness.

Among the control process measures that would be important for assessing advertising effectiveness are the goals of the consumer, the purpose for which consumers' seek information, and the expertise and prior beliefs of the consumer. Because goals provide an organizing framework for consumer behavior, they determine the product features and benefits consumers find relevant and for which they seek information. (c.f.: Barsalou 1983, 1985, Holyoak and Thagard 1997, Huffman and Houston 1993). Goals determine those pieces of information that are the most salient and accessible to consumers in a particular situation (Fazio 1989). The specific goal giving rise to a consumer's search for information and choice process will prime the search process and determine how the consumer interacts with a marketer (c.f., Herr, et al. 1996). It will also establish a cost/benefit equation

that will determine how much effort a consumer will devote to obtaining and responding to information.

Of particular relevance for measurement is goal derived categorization theory, which is associated with several specific measures (Barsalou 1983, 1985). Goodness-of-fit is an important measure that refers to the degree to which information is perceived to be appropriate for achieving a particular goal. Another measure, Ideals, refer to the critical attribute(s) that consumers associate with the prototypical product or service for achieving a particular goal and are thus the types of information about which consumers will be most interested. While these two measures are especially critical in guiding the way consumers deal with interactive advertising, there are other measures of process outcome that may also offer insight into the effectiveness of interactive advertising.

### **Personalization**

In the context of advertising communication, the term advertising media has traditionally been applied to mass communication media in order to distinguish advertising from personal selling, direct advertising, and individualized sales promotions (Stewart and Ward, 1994). However, the power of information technology to transform mass communication into personalized messages may eventually shift the focus of traditional mass advertising to more concentrated and focused audiences. For example, netzero.com (www.netzero.com) offers free Internet access in exchange for viewing personalized advertisements. These messages are the result of questions about the consumer's personal preferences and interests. Personalized advertising requires measures that ascertain what consumers want to know, what they want to buy, and how they wish to buy. Interactive advertising has the potential to assure that consumers only receive relevant messages, which has a twofold purpose.

First, by avoiding bombarding consumers with irrelevant messages that are likely to detract them from accepting pertinent messages, the marketer can send messages that are most likely to generate purchases or other desired responses. Second, mass advertising is costly and usually unnecessary for many products that do not apply to all people. Therefore, personalized advertising based on individual characteristics and tailored to individual preferences is potentially more efficient for the marketer. Thus, a potentially important measure of interactive advertising effectiveness is the degree to which advertising is perceived to be personalized and individually focused. For example, a number of firms now

specialize in providing data on consumer's web surfing habits (for example, www.doubleclick.com), which suggests something about consumers' purchasing needs and preferences.

Moreover, even if the idea of personalized advertising is not new (Stewart and Ward, 1994), interactive television (www.tivo.com), the Internet, and other interactive technologies make personalized advertising a more viable vehicle, assuming, consumers wish to have personal information shared with a marketer or advertiser. It is likely that consumers will differ with respect to their preferences for personalization in general and personalization of information about specific products and services, depending on what information the consumer must provide. Moreover, today's technologies can measure the effect of a personalized advertising message that is an invitation for some response on the part of the consumer.

For example, mypoints.com (www.mypoints.com) and coolsavings.com (www.coolsavings.com) send personalized e-mails to targeted consumers asking them to visit a site and purchase a product. Based on click behavior, the marketer can observe whether the consumer visited the advertised site and completed a product purchase. Therefore, the effects of personalized advertising are much easier to track and measure than the typical advertisement appearing in traditional media.

### **Participation**

User involvement has been widely touted as a means for improving advertising effectiveness (Stewart and Ward, 1994). Similarly, user involvement and participation have been shown to improve user satisfaction and performance in the design of other information systems (McKeen et al., 1994). Moreover, user interaction has been widely recognized a means for providing a more accurate and complete assessment of user information requirements (Ives and Olson, 1984). Following Barki and Hartwick (1989) and Krugman (1967). Consumer involvement refers to a subjective psychological state of the consumer and defines the importance and personal relevance that consumers attach to an advertisement or product. On the other hand, consumer participation refers to the actual actions taken by the consumer to partake in the advertisement process.

While it has long been possible to obtain self-reports of consumers' involvement and participation, interactive advertising has the potential to provide a direct measure of consumers' involvement and participation through

examination of the frequency and type of interaction with the advertiser. Interactive media can significantly involve the consumer in the advertising process, far beyond the extent to which traditional media can. Therefore, consumer involvement can be an important benefit arising from the use of interactive media in advertising. Many commercial websites focus on involving consumers in the advertising and purchasing process by allowing them to participate in their search process. For example, carsdirect.com (www.carsdirect.com) offers an adaptive process that attempts to help consumers identify the vehicle of their choice based on their preferences.

Hence, this process allows consumers to actively participate in the advertising process, by providing information consumers regard as important and helps them make the most informed decisions. Consequently, active participation in the advertising process may be an important element of advertising effectiveness. There may be circumstances, however, where the consumer does not wish to be such an active participant either because they lack the expertise to be active or because they do not regard the benefits of such participation as greater than the costs imposed by such participation.

### COMPREHENSION

Comprehension refers to the recall of the message intended by the advertiser in response to a product category and brand cue (Stewart and Furse, 1986, Stewart and Koslow, 1989). Better comprehension is established when there is a consensus between the marketer and the consumer as to the shared meaning of an advertisement. In contrast, incomplete product disclosure may create confusion. Given the anonymous and ambiguous nature of much Internet advertising and interactive shopping (Alba et al., 1997), consumers may have difficulty comprehending the messages of many advertisers and may not fully understand the true characteristics of a product.

The uncertainty arising from incomplete comprehension may deter customers from purchasing a product or return it after purchase since it does not meet their expectations. Therefore, comprehension is a vital part of interactive advertising. The reduction of consumer uncertainty involves eliminating gaps in information sought by a consumer by providing various kinds of information relevant to and useful to consumers. High levels of equivocality tend to arise when consumers experience confusion and ambiguity. Such confusion and ambiguity may not be the result of a lack of information in all cases, however. The existence of multiple interpretations and

conflicting views may, in fact, represent more information, but still produce equivocality.

Interestingly, the types of media and messages that reduce uncertainty may not be the same as those that reduce equivocality. Lean media, by providing relevant information without subtlety or nuance may reduce uncertainty, without producing any change in equivocality (Chidambaram and Jones, 1993). Two ads claiming that their featured product is recommended by dentists may both provide important information that reduces uncertainty about the products. However, in this instance, equivocality with respect to the two products might well remain. The resolution of equivocality would be a different matter, and might require richer media and the willingness of the consumer to become engaged in active information search.

Thus, comprehension as a process outcome measure is rather different from comprehension as it has usually been defined in the advertising literature. Comprehension is not merely a matter of measuring whether people can recite a claim intended by an advertiser; it is also characterized by measures of the degree to which a claim reduces uncertainty and the extent to which it may reduce equivocality.

### FEEDBACK

There are at least two parts to interactive advertising: the marketer presents the message and the consumer responds to it (Clarke and Brennan, 1991). For an advertisement to be effective, both the marketer and the consumer must mutually agree that the consumer has understood the message (Clarke and Wilkes-Gibbs, 1986). Feedback from the consumer to the marketer plays an important role in advertising since the consumer should understand exactly what the marketer intends, and the marketer should, in turn, adjust the message so that it is clearly understood. Feedback is important to the speed and effectiveness of advertising because it enables the marketer to determine the extent to which consumers understand the message and whether the marketer should adjust the message presentation accordingly. Fundamental to the measurement of the effectiveness of interactive advertising is whether consumers are indeed responding and providing feedback. To the extent that advertising fails to elicit feedback, of some type, it is by definition not interactive regardless of the marketer's intent and the medium used.

### Other Control Process Measures

The various measures described as control process measures are quite general. They are, in fact, classes of measures rather

than specific operational measures. There are also likely to be other important classes of control process measures that have not been identified above. A key conclusion is that future research on the effectiveness of interactive advertising will need to focus more on process measures than has been the case in prior advertising research. Interactive advertising, by definition, is a process; it is also far more important to characterize it as a process than was the case in measuring the effectiveness of more traditional advertising. The nature and characteristics of this process are critical elements for understanding and measuring the effectiveness interactive advertising. Future research on the effects and effectiveness of interactive advertising will need to focus on process measures as well as the outcome measures that has characterized research on more traditional types of advertising. There are also many ways to operationalize the various classes of control process measures discussed above. Some operationalizations will be more diagnostic than others will; some will be more sensitive than others, and some will be more useful for building theories and models of how interactive advertising works. A potentially rich vein for future research on interactive advertising will involve the comparison and relationship of various alternative operationalizations of control process measures.

### **Outcome Measures**

In contrast to process measures, outcome measures focus on the consequences of use of interactive media on advertisement effectiveness. Many outcome measures are well known to advertising and marketing scholars (see Stewart, Furse and Kozak 1983 and Stewart, et. al. 1985 for comprehensive reviews of these measures). Thus, these measures will not be reviewed here. It is useful to note, however, that such traditional measures as awareness, recall, attitude change and purchase behavior are also relevant in an interactive advertising context. However, these measures are likely to be influenced much more by characteristics of the consumer in an interactive context. A structural view of interactive advertising suggests that there is a reciprocal and recursive relationship between interactive media and advertising effectiveness. A critical question for future research is how traditional measures of advertising effectiveness will be influenced by an interactive context in which consumers may also have a variety of tools to assist them in their interaction. For example, advertising and recall, at least as measured by traditional measures of memory, may be less relevant in a context in which a consumer can create such external memory aids as bookmarks. In addition to changing the meaning of

traditional measures of advertising effectiveness, the interactive context will increase the need to measure other factors that have received less attention in traditional advertising research. These measures are the focus of the discussion in this paper.

### **Satisfaction**

Satisfaction has long been a key element in interactive group work (Hackman, 1990); therefore, satisfaction in advertising communication may be regarded as another element of advertising effectiveness. Interactive communication has been shown to improve satisfaction with the decision process, at least in some settings (Applegate et al., 1986), although this may not always be the case. Interaction of the consumer with the marketer may similarly influence consumer's satisfaction both with the purchase decision and the interaction itself. Indeed, there are at least two dimensions of satisfaction on which measurement may focus: (1) satisfaction with the interactive process and (2) satisfaction with the purchase of a product or the outcome (Dennis et al., 1988). These two dimensions of satisfaction may be related, but this need not always be the case.

Future research will need to examine the extent to which these two dimensions of satisfaction are related, and under what circumstances various relationships are manifest. Satisfaction arises, in part, from the process of collecting information about products, finding new products, and comparing products through an interactive process that takes in account personal preferences both for product characteristics and the nature of the information search process. Many Internet sites offer services and tools designed to make it easier for consumers to collect information. Such services and tools include adaptive questionnaires, interactive Web sites, and live operators, among others. These services and tools are intended, in part, to increase customer satisfaction with interaction. For example, carsdirect.com ([www.carsdirect.com](http://www.carsdirect.com)) offers a 24/7 service of live operators that consumers can call to ask questions about vehicles, financing, and purchasing.

### **Trust**

Trust is the subjective evaluation of another entity's characteristics based on limited information (Beccera and Gupta, 1999). In the context of marketing, limited information about products' attributes and the intent of the marketer to provide a fair transaction can give rise to the need for consumers either trust the marketer, rely on third parties for



additional information, or take other action to reduce risk. Consumers' trust towards a marketer can be defined as the subjective probability with which consumers believe that the marketer will perform a particular transaction in a manner consistent with their expectations.

This definition captures two important attributes of trust: first, the subjective probability embraces the fact that trust is not objective but a personal anticipation; such subjective probabilities may be especially useful measures of advertising effectiveness, especially if such measures are obtained over time. Second, expectations represent a measure of what consumers have come to believe based on prior experience. In the marketing literature, there is a general consensus that trust has at least two components, both of which can be measured (Geyskens et al., 1998).

First, credibility deals with predictability and fulfillment of implicit and explicit requirements of an agreement. This is generally considered to be a weak type of trust that rests on reputation and calculativeness (economic rationale). On the other hand, goodwill or benevolence deals with expectations that a party will not act opportunistically, even given the chance. This is the higher form of relational trust that is built on familiarity and experience, and is usually based on personal experience rather than reputation, calculation, or economic rationale. Thus, following Ganesan (1994), trust may be measured in terms of two distinct components: (1) credibility, which is based on the extent to which the consumer believes that the marketer has the expertise and honesty to perform the transaction effectively and reliably, and (2) benevolence, which is based on the extent to which the consumer believes that the marketer has intentions beneficial to the consumer when new arise. In traditional advertising, the marketer has limited potential to raise the level of consumers' trust since one-way communication is unlikely to produce trust (Mayer et al., 1996). Reciprocal communication, however, facilitates trust building and commitment (Anderson and Weitz, 1989).

While it is generally agreed that trust has an economic value (Hill, 1990) and can be a source of competitive advantage (Barney and Hansen, 1994), traditional advertising has not necessarily been focused on building trust, despite the fact that trust has an important influence on the behavior of consumers (Schurr and Ozanne, 1985). On the other hand, interactive advertising has the potential to promote consumers' trust towards the advertiser and product through reciprocal information exchange, customer support and technical assistance, reciprocal communication, operational linkages,

and other specific adaptations by the marketer to the needs of the consumer. In sum, in contrast to other types of advertising, interactive media offers greater potential for creating trust among consumers and for building greater credibility for advertising messages. Thus, trust is likely to an especially important and useful measure of advertising effectiveness. The complexity of the construct of trust makes it an especially interesting and rich area for future research on the effectiveness of interactive advertising.

### **Persuasion**

Persuasion implies an attempt to move, affect, or determine a purchasing decision (Bass, 1981). Interactive advertising may be a far more powerful persuasive influence than traditional advertising. Interactive communication provides opportunities to personalize information presentation, promote trust, identify objections and points in need of further clarification, and modify the offering itself, much as is the case with personal selling. Therefore, interactive media should further enhance the ability of the marketer to persuade. Indeed, Zigurs et al. (1988) have proposed that the pattern of persuasion behavior should be different depending on the degree to which communication is interactive. Resistance to the adoption of new products and services is an especially significant obstacle faced by marketers. Interactive communication may well have the effect of decreasing resistance to new products (Lucas, 1974), by avoiding development or communication of irrelevant or unimportant features of the product and by improving the consumers' understanding of the product (Robey and Farrow, 1982, Stewart 1986). Measurement of the effectiveness of interactive advertising for new products should be contrasted with the effectiveness of more traditional media, especially in the context of new products.

### **Quality of Decisions**

Consumer satisfaction, loyalty, and trust are likely to be by-products of the quality of consumers' decision. An emerging body of research provides evidence that information technology impacts the quality of decision-making. Lam (1997) demonstrated that the quality of decisions was better for complex tasks when using interactive communication was involved. Unfortunately, in many situations, there is no objective measure of decision quality available (Watson et al., 1988). Indeed, the heterogeneity of consumers' goals and preferences makes the definition and measurement of decision quality, whether by the consumer or the marketer, a highly idiosyncratic proposition. Nevertheless, interaction with

consumers can provide significant information about the nature of consumers' preferences in regards to products and product features. Therefore, marketers can use this information to modify and improve future products and make better decisions regarding aspects that consumers find most useful. Moreover, interactive media can promote marketer's learning on consumers' characteristics and preferences, which will improve customer support, technical assistance, and future promotions. Therefore, an important effect of interactive should be better quality of decisions for future advertisements and future products. Consequently, a measure of interactive advertising effectiveness should be the success of future advertising and subsequent products and product-related services. This is a very distinct characteristic of interactive advertising.

**Decision Efficiency** Previous research suggests that effective reduces the time required to make decisions (Short et al., 1976). Dennis et al. (1988) concluded that an important outcome of interactive information technologies is to reduce the time required to reach to a decision. Interactive media provide the opportunity to combine the process of advertising, transacting the sale, and collecting payment (Cutler, 1990). Since all of these actions can be performed nearly simultaneously, the total time and effort required to communicate an advertising message and sell a product should be substantially reduced. Therefore, another potential measure of the effectiveness of interactive advertising is the time and effort required advertising and completing a sale. Stated somewhat differently, measures of efficiency are likely to be more important and more useful for interactive advertising than for more traditional advertising.

**Sales and Return Reduction** The most frequent measure of advertisement effectiveness used today is some form of choice behavior or sales (Stewart, et al. 1985). It is certainly the case that every advertiser wishes to relate advertising to sales. This focus on choice and sales will not be different for interactive advertising. In many cases, where advertising is tied to an immediate sale, it will actually be easier to measure the effectiveness of advertising in an interactive context. However, in many other cases, the link between advertising and sales in an interactive context will be as difficult to define and measure as it is for much of advertising in more traditional media. For example, where a consumer obtains information via interactive advertising, but buys from a traditional retailer, it may be very difficult to associate the advertising with the sale. Thus, the advent of interactive advertising will not necessarily make it easier to measure the effectiveness of advertising in terms of sales. This will continue to be an area of important

research on the measurement of the effectiveness of advertising even as advertising becomes more interactive.

A sale is not really a sale, however, if a dissatisfied consumer returns a product. It is important that consumers are confident about a product and have developed appropriate expectations prior to purchase in order to reduce the frequency of product return. The better the interaction between the marketer and the consumer prior to purchase, the smaller the chance that a dissatisfied consumer will return the procured product. From a transaction costs perspective, interactive advertising may be regarded as a way to diminish the ex-post cost of receiving already purchased products. Using transaction-cost terminology, this cost may be regarded as a maladaptation cost associated with an unsuccessful transaction. According to Williamson (1975), a method to reduce the ex-post costs of maladaptation is to employ ex-ante ways to avoid future contingencies.

The relationship between advertising research and economic theory, especially transaction cost economics, may well produce fertile research opportunities and suggest yet additional measures of advertising effects and effectiveness. Interactive advertising prior to purchase certainly has the potential to improve the transaction process and reduce unsuccessful purchases and consequent returns. Interactive advertising would be particularly important for experience goods with complex descriptions whose quality and attributes cannot be fully assessed prior to purchase (Nelson, 1970). Consequently, interactive advertising should reduce the level of returned products after purchase. Thus, another measure of advertising effectiveness would be a reduction in the returns of purchased goods.

### **Brand Equity**

Measures of brand equity and changes in brand equity over time have become important measures of advertising effectiveness and business success. Such measures will play a prominent role in the evaluation of interactive advertising. While traditional measures of brand equity, such as strength of attitude toward the brand and resistance to different amounts of price reductions on competitive products (Moran 1988) will remain important, the interactive context potentially offers an opportunity to develop and measure a far richer conceptualization of brand equity. Measures such as trust, satisfaction, and the speed and ease with which consumers make decision can be linked to such economic constructs as consumers' switching costs, uncertainty, and transaction costs

to produce new measures of brand equity anchored in transaction cost economics.

### **Benefits to the Consumer**

Although much of the focus of traditional measures of advertising effectiveness has been on benefits to the marketer, the effectiveness of advertising also can be viewed from the perspective of the consumer. In an interactive context, the benefits that advertising provides to consumers may have an indirect influence on measures of advertising effectiveness of primary interest to advertisers and marketers. Thus, an especially interesting area for future research on the effects and effectiveness of interactive advertising will be the benefits the advertising provides the consumer, and in turn, the relationship between measures of these consumer benefits and measures of effectiveness of interest to marketers. Keeney (1999) has suggested a variety of ways in which the Internet might create value for consumers. These include minimizing errors in transactions, lowering costs of products and services, designing optimal products or product bundles, minimizing shopping time, and increasing the enjoyment of shopping, among others. These various outcomes are undoubtedly valuable to consumers. The Internet is not unique in its ability to deliver any these outcomes, however, though clearly it is a means for doing so and may enjoy some advantages relative to other means in some situations and among some consumers. It is certainly the case that these various benefits can become the basis for developing additional measures of advertising effectiveness.

### **Problems in Assessing the Effectiveness of Interactive Advertising**

Although there are many potential measures of advertising effects and effectiveness, there are unique problems associated with measuring advertising effects in an interactive setting. Some of these problems are similar to problems associated with measuring the effectiveness of more traditional advertising, but the reciprocal influence of consumer on marketer and marketer on consumer makes it far more difficult to identify primary causes and effects. There are some especially vexing issues associated with measurement in an interactive context, but research on these issues could be especially useful.

### **Interactive Advertising Does Not Work Alone**

Advertising is only a part of a total marketing effort. A product that is poorly positioned, overpriced, inadequately distributed, badly packaged, or inferior to competition may suffer sales

declines even though the advertising itself is well-conceived and professionally executed. The specific contribution of advertising to sales has always been difficult to ascertain. Interactive advertising may well make the determination of precisely what marketing actions produced a particular outcome even more difficult to do. The influence of any particular advertising message may be less important than the cumulative reciprocal communication between advertiser and consumer. Recently, several scholars have argued that the increasing availability of information, and the sophistication of the technology for obtaining, processing and analyzing this information, are blurring the boundaries of the several elements of the marketing mix (Glazer 1991, Ray 1985).

There have also been calls for changes in the organization of both the marketing function and the firm itself to accommodate this blurring of traditional functional lines within marketing and between marketing and other functional disciplines within and external to the firm (Glazer 1991, Webster 1989). This blurring of boundaries has been partially recognized by calls for "integrated communications," but the blurring extends beyond communication activities. Distribution and communication are becoming inextricably linked, and decisions about the one are increasingly difficult to make in isolation from the other. Indeed, it may be difficult to differentiate some marketing activities as clearly serving an advertising or distribution function. Similarly, where interactive advertising is used to better design products, it will be impossible to separate the effects of communication from product design.

Models of consumer response that focus only on the effects of advertising, or that attempt to separate advertising effects from other effects of the marketing mix are likely to be less than helpful or even misleading. Rather than measure the effectiveness of interactive advertising, it may be more useful to measure the effects of integrated marketing programs. Similarly, other consumers and other sources of information may play a role as great or greater than interactive advertising. Discovering consumers' use of these sources and how they integrate such information into decision making will be a challenging research question.

### **The Sales Response Curve Does Not Typically Parallel Response to Other Measures of Advertising Effects**

Often, sales build slowly at first in response to advertising and then accelerate. Thus, there is often a lag between the appearance of advertising and the sales response generated by that advertising. The length of the lag itself may be variable

depending on both the product type and the advertising appeal employed. A lag between advertising and sales response is expected with all products, but it may be particularly acute for those items that are infrequently purchased. Likewise, interactive advertising may be very effective, but it may not produce sales until the consumer is in the market for the advertised product. Consumers who are not currently in the market for a given product are also less likely to respond to interactive advertising. Customer trust, satisfaction, improved decision making and other measures may not translate directly into sales, yet may be particularly important in understanding why consumers do or do not choose to interact in an advertising context.

### **Advertising is Frequently Subject to Threshold Effects**

The response to a marketing program may often be the result of the cumulative effects of an entire campaign rather than a response to a single advertisement or promotion. A \$1,000,000 campaign may have no apparent measurable effect, whereas an expenditure of \$2,000,000 for the same product may break through the consumers' barrier of awareness and pay for itself many times over. Interactive advertising requires that consumers not only pay attention, but also respond. There are likely to be even greater threshold effects in such cases. These threshold effects are often associated with the need to overcome competitors' advertising and promotion and capture the attention of consumers (Stewart 1989, Burke and Srull 1988). Thus, it is likely that measures of advertising effectiveness for interactive advertising will need to focus even more on competitors' advertising and other marketing actions than has been the case for traditional advertising.

### **Use of Multiple Media and Consumers' Integration Across Media Make It Difficult--If not Impossible--To Associate Changes in In-market Sales or Brand Share with a Specific Medium**

Sales response and changes in any of the many other measures of advertising effectiveness may result from a combination of media, or it may be possible that one medium affected the majority of the observed response, while others contributed relatively little. While it is possible to isolate the effect due to a given medium by using only that medium, this is not practical for many advertisers. It is simply not possible to research outcomes associated with each individual medium that may be used in a large campaign. Interactive advertising is likely to occur in contexts that also employ more traditional media. For example, a television commercial may direct consumers to a particular Web site or (800) telephone number. The observed

response is likely to be the result of both types of advertising--the one may not work without the other. In addition, there may be interaction effects of media, say between television and Web based advertising, or between newspaper. Such interaction effects are, by definition, the result of combinations of media. They cannot be attributed in part or as a whole to any one medium. One can only measure the outcome(s) associated with the whole.

### **Finally, Competitive Activity and Other Marketing Variables May Obscure the Relationship Between Marketing Activities and Sales**

Thus, Sales Do Not Always Reflect the Effectiveness of Marketing Actions. Efforts to evaluate advertising and promotion in natural market situations are fraught with difficulties. In-market sales are the result of a complex set of events over which the marketer has little control. This is no different for the case of interactive advertising. Competitors may raise or lower price, increase or decrease expenditures on advertising, or introduce a new product. Retailers may feature products via traditional advertising, via their own interactive advertising or in-store. All of these factors will affect sales and make it difficult, if not impossible, to tease out the effects of specific advertising. Marketers are often interested in the cumulative effects of an entire campaign (Stewart 1999). Campaigns may be defined in terms of multiple advertising executions or combinations of advertising, promotion, and other marketing programs. Just as individual ads should be created with specific objectives in mind, so too should campaigns. Campaigns may have more than one objective, however.

For example, a campaign for a re-positioned product may have as its objectives the creation of awareness of the brand's new position, the inducement of trial of the product by consumers, and the conversion of competitors' customers to the re-positioned brand. Each of these objectives suggests a specific measure of success for use in evaluation. The evaluation of the success of a campaign is usually carried out via advertising tracking studies. Such studies obtain measures of performance at several points in time so that trends can be identified. The reciprocal nature of interactive advertising will make such tracking studies especially important. However, one problem with campaign evaluation is that the results are the cumulative outcome of all the marketing activities associated with the campaign (Stewart 1999). Identification of the specific contribution of any one marketing activity to overall market response may be impossible.

### A Note on Criteria for Success

Finally, there is the matter of the appropriate criterion for decision making regarding interactive advertising. Evaluation of advertising requires a criterion for success. This criterion needs to be specific, measurable (read quantitative), and bounded by time. It is also important that the criterion be reasonable in light of the current situation in the marketplace. A common mistake in assessing the effectiveness of advertising is to assume that advertising should always produce more of something. Thus, the criterion for success becomes higher levels of awareness, greater levels of trust or increased sales volume. Yet, it takes only little thought to see the error in this perspective. If one hundred percent of consumers are aware of a product, awareness cannot increase further. If every customer who might use a product does, in fact, buy it, and buys it for every conceivable use, there is no opportunity for an increase in sales short of finding new markets or new uses for the product.

There are certainly upper bounds on the amount of time a given consumer is willing to spend interacting with a marketer. While these may appear to be extreme circumstances, they are not so unusual as they may seem. For many mature products awareness is very high and consumers are often quite loyal to one brand or set of brands. In these circumstances the role of advertising may be the prevention of losses of sales by reminding consumers of the product and reinforcing loyalty (Stewart 1994). Andrew Ehrenberg (1983, 1988), a leading British marketing scholar has long argued that the primary role of advertising for mature products is defensive, that is, its purpose is to hold on to current customers. This may well be the role of interactive advertising as well. In mature markets, maintaining interaction (at a given level) with consumers may be the appropriate criterion for assessing the effectiveness of advertising. In cases where advertising is primarily defensive, the evaluation of effectiveness must take a different form. No change in measures of awareness, attitudes, interaction or sales may indicate success.

Obviously, if these measures decline, there is a problem. But if they stay the same, it may not mean that marketing efforts have failed since there is no information about what might have happened had there been no advertising. Indeed, in these situations, which are numerous, the only way to assess the effect of advertising or promotion is to stop, then evaluate what happens. Advertising for any given brand does not occur in isolation. Rather, it most often occurs in the context of

advertising and promotion for competing brands. Most measures of effectiveness tend to ignore this fact, however. The only exception is choice, where the decision to buy one brand means that other brands are not purchased. Measures of awareness, comprehension, and attitude are often obtained for a given brand of interest but not compared to similar measures for competitors.

Yet, the absolute value that a brand obtains on an attitude scale is really less important than the fact that attitude toward the brand is higher than for competitors. This notion of relative measurement may seem trivial, but a number of researchers have suggested that relative measures may be more sensitive than absolute measures (Geiger 1971, Stewart 1989). This appears to be true of a wide range of measures. For example, one study found that measures of recall appeared to be unaffected by advertising when recall was measured for only the advertised brand. However, when the recall for the advertised brand was compared to recall for competitive brands, the advertising had a decidedly strong effect.

### CONCLUSIONS

Interactive advertising poses new and difficult challenges related to the measurement of its effects and effectiveness. The reciprocal communication between marketer and consumer will make it difficult to isolate the influence of any one advertising exposure. This means that the focus of advertising evaluation will need to shift from a focus on outcomes to a focus on both process and outcome. The role of the consumer in selecting advertising, in choosing when and how to interact (if at all), and the goals and purposes of consumers involved in the interaction will be especially important dimensions of advertising that will require new measures and new conceptualizations of how advertising works. It is also likely that as the marketing mix becomes increasingly integrated and the same vehicles assume multiple functions (communication, distribution etc.), it will become increasingly difficult to conduct relevant research on advertising without consideration of the larger context of the full marketing mix.

This does not mean that research on advertising in isolation from other elements of the marketing mix will disappear. It does mean that the study of advertising in the context of the larger mix will need to complement such research. In addition, the consumers' use of other information sources, especially the consumers' interaction with other consumers, will be important for understanding how and why consumers respond as they do to interactive advertising. Despite the challenges posed by interactive advertising, its wide scale use

will provide new opportunities for research and enrich the understanding of advertising effects. Advertising has always been interactive at some level; the consumer has never really been the passive recipient of advertising. Interactive advertising simply makes obvious that the consumer must be the focal point for understanding the effectiveness of advertising.

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