



On Resonance: A Critical Pluralistic Inquiry Into Advertising Rhetoric

Edward F. McQuarrie; David Glen Mick

The Journal of Consumer Research, Vol. 19, No. 2 (Sep., 1992), 180-197.

Stable URL:

<http://links.jstor.org/sici?sici=0093-5301%28199209%2919%3A2%3C180%3AORACPI%3E2.0.CO%3B2-N>

Your use of the JSTOR archive indicates your acceptance of JSTOR's Terms and Conditions of Use, available at <http://www.jstor.org/about/terms.html>. JSTOR's Terms and Conditions of Use provides, in part, that unless you have obtained prior permission, you may not download an entire issue of a journal or multiple copies of articles, and you may use content in the JSTOR archive only for your personal, non-commercial use.

Each copy of any part of a JSTOR transmission must contain the same copyright notice that appears on the screen or printed page of such transmission.

The Journal of Consumer Research is published by Journal of Consumer Research Inc.. Please contact the publisher for further permissions regarding the use of this work. Publisher contact information may be obtained at <http://www.jstor.org/journals/jcr-inc.html>.

The Journal of Consumer Research
©1992 The University of Chicago Press

JSTOR and the JSTOR logo are trademarks of JSTOR, and are Registered in the U.S. Patent and Trademark Office. For more information on JSTOR contact jstor-info@umich.edu.

©2003 JSTOR

On Resonance: A Critical Pluralistic Inquiry into Advertising Rhetoric

EDWARD F. MCQUARRIE
DAVID GLEN MICK*

Print ads exhibit resonance when they combine wordplay with a relevant picture to create ambiguity and incongruity. This article uses multiple perspectives and methods within a framework of critical pluralism to investigate advertising resonance. Semiotic text analyses, a content analysis of contemporary magazine ads, two experiments, and phenomenological interviews combine to yield insights into the operation, prevalence, impact, and experience of resonance. Specifically, the two experiments show that manipulation of resonance produces positive treatment effects in three domains: liking for the ad, brand attitude, and unaided recall of ad headlines. These effects appear contingent on subjects' successful decoding of resonance and their tolerance for ambiguity (an individual difference variable). Implications for future research on resonance and for the use of critical pluralism in consumer advertising research are discussed.

Come See the Shooting Stars
[AD FOR A GOLF TOURNAMENT]

Puns surprise and entertain, expressing multiple meanings with a single word or phrase (Redfern 1982). These qualities may explain why puns and wordplay regularly appear in ads (Grinnell 1987), including many award winners (Beltramini and Blasko 1986). In fact, the use of wordplay in advertising dates back many years, and literary critics have long discussed its character and speculated on its impact (Kirshner 1970; Quirk 1951; Redfern 1982; Sheldon 1956). Nonetheless, some practitioners and advertising researchers have disputed the value of wordplay. Claude Hopkins (1927, p. 179), a grandfather of modern advertising, asserted that "frivolity has no place in advertising," while, more recently, Rossiter and Percy (1987, p. 512) have counseled, "Do not use ambiguous words or puns." Critics allege that wordplay is too indirect in its approach and thereby detrimental to persuasion. This controversy fits within the long-running debate about the superiority of hard-sell versus soft-sell ad-

vertising techniques (Fox 1984). Despite its regular occurrence and uncertainty about its impact, consumer researchers have yet to investigate wordplay in any concerted manner.

In this article we adopt a multiperspective, multi-method approach with three main purposes. The first is to clarify and extend on a theoretical level the concept of advertising *resonance*, which is characterized here as wordplay in the presence of a relevant pictorial. Drawing insights from semiotics and its text analysis tradition, we interpret a set of resonant ads. These analyses are then combined with prior research in aesthetics and psycholinguistics to derive hypotheses about resonance. Our second purpose is to investigate advertising resonance in a causal design (once with students and then a replication and extension with nonstudents) in which resonance is manipulated and its incremental effects are assessed. Content analysis and phenomenological interviews are also used to complement both the semiotic text analysis and the experimental results. Thus, our third purpose concerns the synergistic insights that emerge from the combination of interpretive approaches in consumer research (e.g., semiotic text analysis, phenomenological interviewing) with positivist approaches (e.g., content analysis, experimentation). Some consumer researchers have questioned the commensurability of interpretivism and positivism (e.g., Anderson 1986, 1988). Others have been more optimistic (Hirschman 1985; Hunt 1991; Lutz 1989), advocating a critical pluralism that would employ multiple methods and invoke appropriate appraisal standards. This article illustrates the benefits of critical pluralism for consumer advertising research.

*Edward F. McQuarrie is associate professor of marketing at the Leavey School of Business, Santa Clara University, Santa Clara, CA 95053. David Glen Mick is assistant professor of marketing at the University of Florida, Gainesville, FL 32611. The authors, each of whom contributed substantially to the project, gratefully acknowledge financial support from the Leavey School of Business at Santa Clara University, the Dean's fund at the Leavey School, and funds from the Marketing Department at the University of Florida. Special thanks go to Susan Fournier for her assistance in conducting interviews. The authors also thank Joe Alba, David Caldwell, Rich Lutz, Shelby McIntyre, Mark Seabright, Tyzoon Tyebjee, and the three anonymous reviewers for helpful comments on earlier versions of this article.

ADVERTISING RESONANCE

McQuarrie (1989) discussed advertising resonance broadly, as a play or twist within an ad's structure that serves to produce an echo or multiplication of meaning. In this article we focus on instances of resonance in which wordplay in the headline is reinforced by an accompanying illustration. For example, a recent ad shows men's ties, arranged to form a bouquet, with the headline "Forget-Me-Knots." Another example, this one for Bucks cigarettes, shows a cigarette pack with a picture of a stag and the headline "Herd of These?" According to McQuarrie (1989) and Sheldon (1956), the process of constructing a resonant ad is straightforward. A cliché or stock expression is first appropriated, and then it is changed slightly and/or placed in an unconventional setting. The illustration (which may serve as the unconventional setting) in conjunction with the phrasing leads to two or more interpretations. It is the central role of the illustration, and the rarity of this particular kind of verbal-visual juxtaposition outside of modern advertising, that justifies the use of the term *resonance* in place of *pun* or *wordplay*. In fact, the accompanying picture that reinforces and even creates the pun "may be advertising's original contribution to the history of the pun" (Sheldon 1956, p. 20).

RESONANCE IN MAGAZINE ADS

To estimate the prevalence of resonance in magazine ads, we randomly selected one issue from 20 of the top 50 magazines (ranked on the basis of annual ad revenue) and conducted a content analysis. The issues were sampled over a six-month period in 1990–1991 and included general interest (e.g., *People*), men's (e.g., *GQ*), women's (e.g., *Family Circle*), and business/financial (e.g., *Business Week*) magazines. All full-page and larger ads from each issue were removed, numbered, and placed in folders ($N = 1,286$). Two research assistants independently coded each ad for the presence of wordplay in the headlines (coder agreement was 84.6 percent). Next, they met to resolve disagreements. Finally, for all ads in which wordplay was agreed to be present, they jointly determined whether an accompanying pictorial reinforced the wordplay. This procedure uncovered 196 instances of resonant ads—15.2 percent of the sample (see examples in Table 1). Every magazine examined contained at least one instance of resonance, and the incidence of resonance was relatively constant across the four magazine categories. Thus, resonance in magazine advertising appears to be a widespread phenomenon.

SEMIOTIC ANALYSIS OF RESONANCE

Semiotic Text Analysis

Semiotics focuses on the structure of meaning-producing events, with the sign (verbal or nonverbal) being

the fundamental unit (Mick 1986).¹ Signs (e.g., words, clothing) combine to form messages and texts (e.g., sentences and short stories, ensembles and fashions).² Both the production of a message or text and the subsequent decoding by readers are governed by rules that are generally known to individuals who are from the interpretive community or culturally constituted code environment in which the message or text is exchanged.³ These rules establish the manner in which signs combine into acceptable and understandable messages or texts and the correlation that signs (as expression) can have with their potential meanings (as content) in specific contexts. Theoretical semioticians have concentrated on describing and classifying both signs and sign functions to explicate the complex nature of communication (see Mick 1986). As a result, a specialized vocabulary has developed (i.e., its own sign system), some of which we define and use here.

Semiotics has influenced prior analyses of advertising as a cultural form of communication (e.g., Barthes [1964] 1985; McCracken 1986; Scott 1990; Stern 1989; Williamson 1978). A semiotic text analysis scrutinizes the various signs in a text in an attempt to characterize their structure and identify potential meanings (Mick, Horvath-Neimeyer, and McQuarrie 1992). Hence, semiotic text analysis readily overlaps with an interpretive-hermeneutic approach to consumer research (Holbrook and O'Shaughnessy 1988, p. 400), which involves the "critical analysis of a text for the purpose of determining its single or multiple meaning(s)." However, meaning can never be fully specified because each interpreter brings a reservoir of personal interests and experiences that introduce various degrees of nonconvergence and idiosyncrasy into the communication process. The distinctive feature of semiotics relative to other approaches to analyzing texts is that semiotics places due weight on the constraints imposed by the structure of signs within a text, on the freedom of the reader to interpret the text in a variety of ways, and on the sociocultural context that jointly shapes the text and its potential readings.

Meaning itself is a complicated and controversial topic. In this article we follow Eco (1976, pp. 66–71) who, in part, conceptualizes meaning as the denotative and connotative associations produced as a reader decodes a text. That is, semantic chains (mental concepts) are activated in memory by the signs in a text. For example, for many readers the word *treasure* would conjure up ideas of riches (jewels and gold), pirates, and something hidden and even dangerous, with each of

¹Sign: anything that can stand for something (its object), to somebody, in some context.

²Text: a combination of signs that forms a larger whole. Texts can be analyzed in terms of both their component signs and the structure that unites these signs.

³Code: a system of signs and rules that allows messages to be constructed and conveyed, e.g., Morse code.

TABLE 1
RECENT EXAMPLES OF RESONANT ADS

Magazine	Advertiser	Headline	Visual
<i>Family Circle</i>	Sorel Boots	It's Haute as Hell in Aspen	Boots in snow
<i>Business Week</i>	Boeing	This Man's Looking for Trouble	Manager beside AWACs plane
<i>Forbes</i>	Embassy Suites	This Year, We're Unwrapping Suites by the Dozen	Chocolate kisses with hotel names/locations underneath each
<i>Cosmopolitan</i>	Equalizer Driving Gloves	The Right Stuffers	Gloves in a Christmas stocking
<i>Better Homes and Gardens</i>	Corelle Tableware	Fashion Plates	Dinner plates with different designs
<i>Money</i>	Toyota Auto Parts	Our Lifetime Guarantee May Come as a Shock	Man holding a shock absorber
<i>U.S. News and World Report</i>	FTD Florists	Avoid the Holiday Whirlwind—Send a Hurricane	Candle in a hurricane lamp enclosure with bouquet
<i>GQ</i>	Daniel Craig Fine Accessories	Forget-Me-Knots	Men's ties arranged as a bouquet
<i>Good Housekeeping</i>	Huggies Disposable Training Pants	Start Toilet Training on the Right Foot	Child standing on right foot putting on training pants
<i>Car and Driver</i>	Bucks Filter Cigarettes	Herd of These?	Cigarette pack with picture of a stag
<i>Golf Digest</i>	Mitsubishi Diamond Tel Cellular Phones	Invest in Diamonds	Picture of Diamond Tel portable cellular phone
<i>Time</i>	AT&T Pebble Beach National Pro Am Tournament	Come See the Shooting Stars	Picture of golfer in midswing
<i>Woman's Day</i>	Bounce Fabric Softener	Is There Something Creeping Up behind You?	Woman's dress bunched up on back of legs because of static cling
<i>Inc</i>	Westin Resorts	We Also Have Resorts for Those Who Don't Want to Lie in the Sand	Picture of golf green with sand traps
<i>People</i>	ASICS Athletic Shoes	We Believe Women Should Be Running the Country	Woman jogging in rural surroundings
<i>Playboy</i>	J&B Scotch	Meet over a J&B	Beef cattle standing on top of the letters "J&B"
<i>Sports Illustrated</i>	Pepsi	This Year, Hit the Beach Topless	Crumpled cap to a Pepsi bottle lying on sand
<i>Newsweek</i>	Isuzu	Dirt, Cheap	Picture of four-wheel-drive vehicle on a dirt road
<i>Fortune</i>	Hitachi Metals	How We Control What You See on Television	Rays of light passing through the shadow mask of a TV monitor
<i>Glamour</i>	Estee Lauder Make-up Pencils	Get the Point, Automatically	Makeup pencils with points exposed

NOTE.—Selected from a sample of 1,286 full-page ads found in one issue per magazine sampled during 1990–1991.

these concepts connected to yet other concepts. This notion of meaning is directly in line with network models of memory in cognitive psychology, including the model of Quillian's discussed by Eco (1976, pp. 122–125), thus providing a partial linkage between the semiotic text analysis to follow and our subsequent experiments.

Resonance: A Semiotic Analysis

In technical terms, advertising resonance presents the consumer with an *incongruous polysemy*. Following Berlyne (1971), *incongruous* means that the structure

of the advertising text deviates from expectations. Following the semiotologist Barthes (1985), *polysemy* means that certain elements (signs) within the ad have been made to convey extra meaning that they would not ordinarily have when standing alone. Most figurative speech, and even language in general, is polysemous, and many ads contain some degree of incongruity.⁴ However, for resonance to be possible, the verbal and visual elements have to combine to create extra mean-

⁴Figurative speech: expressions that depart in an artful way from literal or normal usage, e.g., a metaphor.

ing, and this extra meaning has to depart from normal usage.⁵

Resonance is but one example of a family of literary devices termed “rhetorical figures.”⁶ The best-known rhetorical figure, and the only one previously examined by consumer researchers, is metaphor (Hitchon 1991; Ward and Gaidis 1990). On the basis of Durand’s (1987) semiotic work (see also Dyer 1982), rhetorical figures can be classified according to five types of relations among elements in the rhetorical figure and four types of rhetorical operations. These relations and operations suggest underlying rules and processes that guide the encoding and decoding of ad texts. A full discussion of Durand’s scheme is beyond the scope of this article, but for our purposes it contributes to a more refined analysis of resonance, including a comparison with metaphor.

With reference to Durand’s scheme, both resonance and metaphor perform the operation of substitution, but they do so by means of quite different relations between elements. Consider the metaphor “War is hell.” Whereas a metaphor performs a substitution by connecting two things that have some initial similarity in content (Glucksberg and Keysar 1990), resonance performs a substitution by means of a false homology in which the similarity is imposed (Durand 1987).⁷ Hence, unlike metaphor, resonance always involves an element that is forced to bear a double meaning. Sometimes the false homology will take the form of a homonymic pun, that is, a similarity in sound (Sheldon 1956). An example is an ad showing a shortcake covered with strawberries and whipped cream that proclaims the diet dessert to be “berried treasure.” A semiotic text analysis would suggest that by means of the false homology the qualities of being rich and hidden and the spirit of adventure associated with pirates and deserted islands—particularly appropriate in the case of a diet dessert—all become potentially available for substitution as part of the meaning of the brand. Such an analysis would be based on knowledge of the English language, including the noun “berries” and its variation as a potential past participle, “berried”; the phrase and concept of “buried treasure,” including its symbolism and conventional use in movies and novels;⁸ the picture serving

as an iconic sign of an actual shortcake covered with strawberries;⁹ and so on.

In another example, an ad displays a small flashlight amid holiday wrapping, promising “the gift idea that leaves everybody beaming.” A semiotic analysis suggests that smiles and happiness are linked to flashlights in this context of gift giving by means of the imposed substitutability of the two senses of the word “beaming.” A double indexical relationship is developed for the flashlight with respect to both luminescence and happiness.¹⁰ This in turn links the flashlight to more general ideas of light and cheer in opposition to darkness and gloom. Moreover, the playful twist on beaming assimilates the flashlight to yet other culturally formed associations, for example, how a gift brightens a person’s day.

A distinctive feature of false homologies within the family of rhetorical figures is that they present the reader with an incongruity. What makes the homology “false” is that the chains of semantic concepts being fused by a false homology are typically disparate within the code environment known to the interpreter (Eco 1976, pp. 126 ff.). Consider as an example an ad that shows an opened cap from a bottle of Pepsi lying on a beach, accompanied by the headline “This Year, Hit the Beach Topless.” A semiotic text analysis would indicate that semantic chains involving nudity, rebelliousness, and risk taking are being linked with, and made available as substitutes for, chains involving soft drinks, the relief of thirst, and the like. Although the homology between a bottle without its cap and a woman without a bikini top is, strictly speaking, false, it invites the consumer to discover the underlying connection that makes the rhetorical figure comprehensible. To resolve the incongruity the reader must interpret the text further.

Two other examples help to illustrate this central characteristic of resonance. An ad for NYNEX telephones shows a bank lobby with massive marble pillars and the headline “Chances Are We’re Holding Up Your Bank.” Here the reader encounters the incongruity that “holding up” means supporting as well as robbing and must resolve this apparent paradox for a bank-related ad. Further interpretation may relate the telephone system to the marble pillars in the picture of the lobby, so that the telephone system assumes the columns’ properties as supporting members of unyielding strength and solid reliability. In an ad for tea showing many cups viewed from above, the headline reads, “Get Yourself into a Lot of Hot Water.” Resolution of the incongruity posed by the phrase “hot water” (meaning also “trouble” or “difficulty”) invokes an interpretation of this tea as something hot and active, thus positioning this brand away from the tepid and tame. In sum, resonant

⁵McQuarrie (1989) speculated that there could be purely verbal or purely visual resonance. We use a more narrow definition, related to McQuarrie’s verbal-visual resonance, to strengthen the correspondence between our theoretical foundations and the specific empirical tests described subsequently.

⁶Rhetoric refers to the body of principles and theory concerned with the compelling presentation of facts and ideas, or the art of persuasion. Rhetorical figures are specific examples of figurative speech, each having a distinct structure and the potential to enhance persuasion. Metaphor, simile, and rhyme are the best-known examples, but dozens more have been cataloged.

⁷Homology: any similarity or correspondence.

⁸Symbolic sign: a sign that relates to its object in an arbitrary or conventional manner, e.g., a letter of the alphabet and its corresponding phonetics.

⁹Iconic sign: a sign that relates to its object by way of imitation or resemblance, e.g., a portrait.

¹⁰Indexical sign: a sign that relates to its object by some correspondence of fact, as in a causal relation.

ads, because of the imposition of similarity, call forth additional interpretation in order to make sense. By contrast, it has been argued that metaphor may not require such extra interpretation (Hoffman 1984). The construction of a meaningful incongruity by the juxtaposition of verbal and visual elements thus sets resonance apart both from other rhetorical figures and from plain speech.

Resonance: Aesthetic Perspectives

The semiotic analysis of resonance can be extended to integrate insights from the study of aesthetics. Resonant ads have aesthetic potential because of their polysemy, that is, the multiple meanings engendered by the structural relation of signs within the ad text. Recall that, in the Pepsi ad, the word "topless" was made to carry two distinct meanings, with the extra or unusual meaning created as a result of the juxtaposition of headline and picture. Such polysemous constructions can also be described as ambiguous. The use of the term "ambiguity" to indicate the possibility of multiple interpretations has a long history in aesthetics (Berlyne 1971; Eco 1976) and also in psycholinguistics (Perfetti et al. 1987) but differs from usage in consumer research, in which "ambiguity" has been defined as the absence of information (Hoch and Ha 1986) or equal probabilities (Kahn and Sarin 1988). Resonant ads are not ambiguous in these latter senses; they are ambiguous because of a surplus rather than a deficit of meaning. To understand the aesthetic value of resonance, it is important to distinguish resonant ads from those that use "blind" headlines, in which the headline is relatively meaningless on its own. Ambiguity in the sense of being opaque is not what resonance is about.

The polysemous ambiguity created by resonance provides the opportunity for an aesthetic experience. From a semiotic perspective, "the message assumes a poetic function . . . when it is *ambiguous* and *self-focusing*" (Eco 1976, p. 262). Eco explains that such messages create an aesthetic effect by strategically violating certain rules of the code, so as to activate overlapping and intertwining semantic chains that are normally not associated. He notes that "ambiguity . . . functions as a sort of introduction to the aesthetic experience . . . instead of producing pure disorder, it focuses my attention and urges me to an interpretive effort (while at the same time suggesting how to set about decoding)" (Eco 1976, p. 263). Resonance is a rhetorical device used for creating and resolving ambiguity, thereby facilitating aesthetic experience. To say that resonance is an aesthetic phenomenon is to say that resonant ads are similar in some respects to works of art (cf. Redfern [1982, 1985] on puns). Inasmuch as aesthetic responses need not be limited to formally constituted art objects (Berlyne 1971; cf. Holbrook 1980), to experience an ad can itself be a form of symbolic consumption (Hirschman and Holbrook 1980; Levitt 1970; Levy 1959).

Linking resonance with aesthetics is useful because it suggests that ambiguity can be a source of aesthetic pleasure, provided that it is resolved. The link to aesthetics also provides a context for understanding the incongruity property of resonance. Eco (1976) discusses the idea that the aesthetic often involves a deviation from the norm. The device of "making it strange" is sometimes viewed as a distinctive feature of aesthetic texts (cf. Berlyne 1971, p. 140). Both ambiguity and incongruity are among the properties that Berlyne (1971) found to be characteristic of aesthetic stimuli. The fact that resonance arises from a combination of these two properties suggests that its aesthetic potential will typically be high. Moreover, in resonant ads semantic content is established by means of the structural relationship among verbal and visual signs within the ad text (cf. Pollay and Mainprize 1984). Such use of form to convey meaning is also a characteristic feature of aesthetic texts (Eco 1979, 1984).

HYPOTHESES

Liking for the Ad

Semioticians speak of "the pleasure of the text" (Barthes 1985). In semiotics, the activity of decoding or interpreting texts, particularly aesthetic texts, is viewed as intrinsically rewarding. In the case of resonant ads, the experience of pleasure achieved through successfully decoding the resonance should create liking for the ad. Berlyne's (1971) work on the psychology of aesthetics provides additional support for the pleasurable impact of stimulus ambiguity and incongruity (cf. Redfern [1982] and Sheldon [1956] on puns). Both of these stimulus properties are among the "collative variables" found to stimulate arousal. Berlyne (1971) summarizes evidence that arousal may be related to pleasure in two ways, which he terms "arousal boost" and "arousal jag": moderate increases in arousal may be pleasurable in themselves (arousal boost), or an increase in arousal which is then alleviated may yield pleasure (arousal jag). The latter sequence seems most applicable to advertising resonance: ambiguity (multiplicity) of meaning initially causes tension, which is then resolved once the reader succeeds in decoding the message. An assumption that underlies this application of Berlyne's work is that resonance creates only a moderate degree of arousal. Extreme arousal, in Berlyne's view, ceases to be pleasurable because of the nonmonotonic relationship between arousal and pleasure.

Although semioticians do not ordinarily think in terms of individual difference variables, psychologists have identified a personality disposition termed "tolerance for ambiguity" that may influence the enjoyment of resonant ads. Some people cope well with ambiguous stimuli and situations, while others dislike and avoid them (Budner 1962). Because the pleasure response is contingent on the resolution of ambiguity and incon-

gruity, resonant ads may be pleasurable for some people but not for others. That is, confronting ambiguity may lead to displeasure on the part of those who do not tolerate ambiguity well, whether it is resolved or not. Hence, we examine tolerance for ambiguity as a contingency upon which the hedonic value of resonant ads depends.

H1: There is greater liking for resonant ads relative to the same ads with resonance removed.

H2: Tolerance for ambiguity interacts with resonance such that the greater a person's tolerance for ambiguity, the greater the liking for resonant ads relative to the same ads with resonance removed.

Brand Attitude

Resonance may produce a more positive brand attitude via two routes. First, a resonant ad uses tacit means to assert that the brand has positive features (i.e., "berried treasure," as opposed to "This is a rich and tasty dessert"). Although not directly stated, rich taste is implied by "berried treasure." Such constructions "involve the recipient . . . [allowing him to] congratulate himself on his astuteness" (Redfern 1982, p. 273). In consumer research, Kardes (1988) found that, given high involvement, ads characterized by implicit versus explicit conclusions invited more self-generated inferences, which led to more favorable brand attitudes. A similar result can be expected in the case of resonance because resonance requires a self-generated resolution to the ambiguity and incongruity it presents to the reader. The second route to a positive brand attitude involves a kind of distraction effect (cf. Redfern [1982] on puns, p. 270). That is, we would expect to see less counterarguing in the case of resonant ads, inasmuch as effort is expended on decoding the ad, not on contesting its claims.

Positive effects on brand attitude, however, may be contingent on whether the resonance is univalent positive in its meanings. Some resonant ads include negative meanings that are not consistent with a completely positive portrayal of the brand (similar aspects of puns are noted by both Redfern [1982] and Sheldon [1956]). We call this *inconsistent resonance*. Consider the tea ad analyzed earlier. One possible interpretation is that this company offers many types of tea. A second possible interpretation is that this tea will get you into trouble. While this reading is probably not intended by the sponsor, nor presumably accepted by the consumer, the psycholinguistic literature on the processing of ambiguity suggests that this interpretation may nonetheless be activated involuntarily (Raynor and Duffy 1986). As a result, the consumer produces meanings about the brand that are both favorable and unfavorable. Hence, brand attitude for inconsistent resonant ads should be less favorable overall than brand attitude for consistent resonant ads that are univalent positive.

H3: Resonant ads produce more favorable brand attitudes as compared to the same ads with resonance removed.

H4: Resonant ads produce less counterarguing than the same ads with resonance removed.

H5: Brand attitudes will be less favorable for inconsistent resonant ads as compared to the same ads with consistent resonance.

Recall

Resonance that is successfully decoded should lead to enhanced recall because of the additional semantic chains invoked as the consumer interprets the ad. As Eco (1976) has described, this semiotic formulation in terms of semantic chains closely matches research in cognitive psychology on the spreading activation of concepts in network models of memory, and it also parallels an elaboration explanation of depth of processing (Anderson and Reder 1979). Resonance will be processed at a deeper level (i.e., with greater elaboration) because of the multiple semantic chains invoked, and this facilitates subsequent retrieval because of a larger number of paths being available for reconstructing the ad. Along similar lines, a body of literature in consumer research has reported greater recall for messages based on interactive images (Childers and Houston 1984; Houston, Childers, and Heckler 1987; Lutz and Lutz 1977).¹¹ In the case of resonance, the interaction between headline and picture should lead to a greater number of associative pathways (elaborations) being formed (Childers and Houston 1984), which will facilitate retrieval of the ad headline. An important control variable in this context is looking time. Ambiguous ads that are merely opaque, and not polysemous in the manner of resonant ads, could exhibit longer looking times because subjects have to puzzle over them. Although longer looking time might then lead to greater recall, such an increase in recall would be spurious from the standpoint of demonstrating the memory effects of resonance per se. In this experiment we use an event recorder to measure and statistically control for looking times.

H6: There is greater recall for headlines of resonant ads as compared to the same ads with resonance removed.

EXPERIMENT 1

Method

Developmental Work. Crucial to the success of experimental work on resonance is the development of

¹¹Note that the interaction between verbal and visual signs that characterizes resonance is not precisely the same thing as the interactive imagery of Lutz and Lutz (1977), which they defined as the copresence of brand and product class information within the visual portion of an ad. Nonetheless, the argument for greater recall for resonant ads is similar.

TABLE 2
STIMULI USED IN EXPERIMENT 1

Fictitious brand name	Visual element	Consistent resonant headline	Inconsistent resonant headline	Nonresonant headline
Mini Lite Flashlight	A small flashlight along with some gift wrap	The gift idea that leaves everybody beaming ^a	The gift idea that makes everybody light up	The gift idea that leaves everybody happy
Betsy's Diet Desserts	Strawberries in sauce over shortcake	Berried treasure ^a	Berry yourself	Tasty berries
Nelson Tea	Many cups of tea viewed from directly above	Get yourself fit to a tea	Get yourself into a lot of hot water ^{a,b}	Get yourself into a lot of hot tea
Eltron Telephones	A bank lobby done in marble, with a number of columns visible	Chances are we're a pillar of your bank	Chances are we're holding up your bank ^a	Chances are we're used in your bank

NOTE.—The source ads on which these stimuli were based were for the MagLite, Weight Watchers, Lipton, and NYNEX brands, respectively.

^aThese headlines appeared in the source ads; all others were constructed by the authors.

^bThe exact wording of the original headline was "Get your customers into a lot of hot water."

an effective and unconfounded manipulation. Because of the novelty of the resonance concept, and in view of doubts raised about the possibility of manipulating formal or structural properties of ads (e.g., see Deighton, Romer, and McQueen 1989), we conducted a series of pretests. Starting with a pool of resonant ads and using a technique common in psycholinguistic research on ambiguity (Mueller and Gibbs 1987; Perfetti et al. 1987), we changed words in the headline so as to remove the resonance but still convey the basic brand meaning(s) appearing in the resonant version (cf. Sternthal and Craig's [1973] recommendations for humor research). For instance, in the flashlight ad the headline was changed to read, "The Gift Idea That Leaves Everybody Happy" (instead of "Beaming").

Several criteria guided our selection of ads for inclusion in this study. The original magazine ads had to display verbal-visual resonance; the ads had to be constructed such that their resonance was removable; the ads had to make sense on the basis of the headline and the picture alone, since all body copy present in the source ads was removed in the course of constructing the stimuli; the ads had to be readily comprehensible (checked by a small sample of interviews); and the products advertised had to be relevant across age groups and gender. We also sought a range of products that would include durables and nondurables and high and low degrees of symbolism.

In a pretest using side-by-side comparisons, 30 subjects rated a set of resonant ads as having more meanings and greater incongruity as compared with their nonresonant controls. A second pretest with 47 subjects showed that, despite their polysemy and incongruity, the resonant versions of the ads were rated neither more nor less puzzling than the nonresonant versions (\bar{X} in both cases = 3.4, on a scale in which 9 indicates puzzling and 0 indicates clear at a glance). In other pretesting that did not involve side-by-side comparisons, or questions about multiple meanings, we were able to establish

the unobtrusiveness of the resonance manipulation; that is, when questioned about the purpose of the research, no subject made any mention of puns, double meanings, wordplay, or any similar term. Furthermore, when shown nonresonant ads in isolation from their resonant counterparts, subjects appeared to accept them as valid attempts at persuasion.

In a final pretest we developed three versions for each of four source ads: a nonresonant version, an inconsistent-resonant version that mixed positive and negative meanings, and a consistent-resonant version with univalent positive meanings (see Table 2). Fifty-two undergraduates saw all three versions of each source ad side by side (the order of presentation varied). Subjects judged both types of resonant versions to be significantly more incongruous and polysemous than the nonresonant versions, and they judged the inconsistent-resonant versions to be less positive in meaning than either the consistent-resonant or the nonresonant versions. In sum, pretesting yielded a stimulus set that included two resonant versions and one nonresonant version for each of four ads (for a flashlight, a telephone, a diet dessert, and tea). The two resonant versions of each ad were further differentiated as univalent positive (consistent-resonant) or mixed in valence (inconsistent-resonant).

Subjects and Procedure. For the experiment itself, 112 undergraduate students participated in groups of one to four. Each subject received an ad booklet, an answer booklet, and a button connected to an event recorder. The ad booklet contained 12 ads, with four test ads occupying the middle four positions. The order of presentation of both the filler and the test ads was varied (eight orders in all). Of the four test ads viewed by each subject, two were nonresonant, one was a consistent-resonant ad, and one an inconsistent-resonant ad. Subjects were told that this was a study of how people think about and respond to ads, that the ads they were going to see were in rough form, and that this type

of pretesting was a common practice in the industry. They were encouraged to respond naturally, as if they were viewing these ads in the course of reading a magazine, and told that they could look at an individual ad for as long or as short a time as they wished. Immediately after viewing each ad, subjects completed a measure of ad liking, a scaled measure of degree of counterarguing, and a measure of brand attitude. They then completed a measure of tolerance for ambiguity, which served as a filler task prior to assessing recall of ad headlines, the final measure taken. Each experimental session lasted approximately 30 minutes.

Stimuli. Each ad in the booklet received by subjects comprised a picture, a headline, and a brand name (Fig. 1). The pictures were clipped from actual magazine ads. To produce the stimuli the picture in the source ad was combined with a headline and brand name generated by a desktop publishing program. Fictitious brand names were employed. After layout and paste-up, 8 × 11-inch color copies were made, and the stimuli were assembled and bound into booklets.

Dependent Variables. Ad liking was measured by the summation of three semantic differential scales, anchored by like-dislike, pleasant-unpleasant, and enjoyable-not enjoyable (coefficient alpha = .92). Brand attitude was also measured by the summation of three semantic differential scales, anchored by good-bad product, high-low quality, and valuable-worthless (coefficient alpha = .88). A self-report of degree of counterarguing, modeled on that used by Deighton et al. (1989), was also taken. Subjects completed two seven-point semantic differential items: "I argued/agreed with the ad," and "I rejected/accepted the ad's point." These two items ($r = .78$) were also summed.

The unaided measure of ad headline recall was taken as follows. After the filler task, subjects were given five minutes to recall as many headlines as they could from among the ads just seen. Two judges, blind to the purpose of the experiment, independently coded each subject's remarks for accurate recall of the test ad headlines. Accurate recall was defined as any approximate reproduction of the headline that included the key phrase that differentiated each of the three versions. Thus, for the flashlight set, the presence of "beaming," "happy," or "light up" was scored as a hit. The judges agreed on 96 percent of the cases; the remaining differences were resolved through discussion.

Looking Time. An event recorder similar to that used by Celsi and Olson (1988) was set up to measure looking time. This is a device that moves a roll of paper past a set of pens at a constant rate. Pressing a button causes the pen to deflect, and the distance between deflections measures the duration of the event. Subjects held an event recorder button in one hand and were told to press the button when they began to look at an ad and to hold the button down until they had finished

looking. A research assistant scored the paper rolls to measure in seconds how much time a subject spent looking at each test ad.

Tolerance for Ambiguity. A search of the literature produced three published scales designed to measure a person's tolerance for ambiguity (Budner 1962; MacDonald 1970; Norton 1975). However, these scales either suffered from low reliability or were much too long and too heterogeneous in content for our purposes. We constructed a modified scale using 20 items that had appeared in at least one of the earlier scales (e.g., "I like movies or stories with definite endings," "I tend to like obscure or hidden symbolism"). In a separate pilot study 118 subjects indicated their agreement or disagreement with each item. Coefficient alpha for this 20-item scale was .64. Following a suggestion given by Nunnally (1978, p. 285), we eliminated all items that had an item-total correlation of less than .15. The resulting 12-item measure was administered during another pretest and yielded a coefficient alpha of .70. In the experiment, tolerance for ambiguity was measured as the sum of the 12 items.

Analysis. For the most part, results were analyzed as a within-subjects design with a single treatment having three levels: nonresonant, inconsistent-resonant, and consistent-resonant.¹² For the analysis of ad liking, the tolerance for ambiguity measure was split at the median and a 2 (tolerance) × 3 (resonance) design was analyzed. In view of the categorical nature of the recall data, a logistic regression was used.

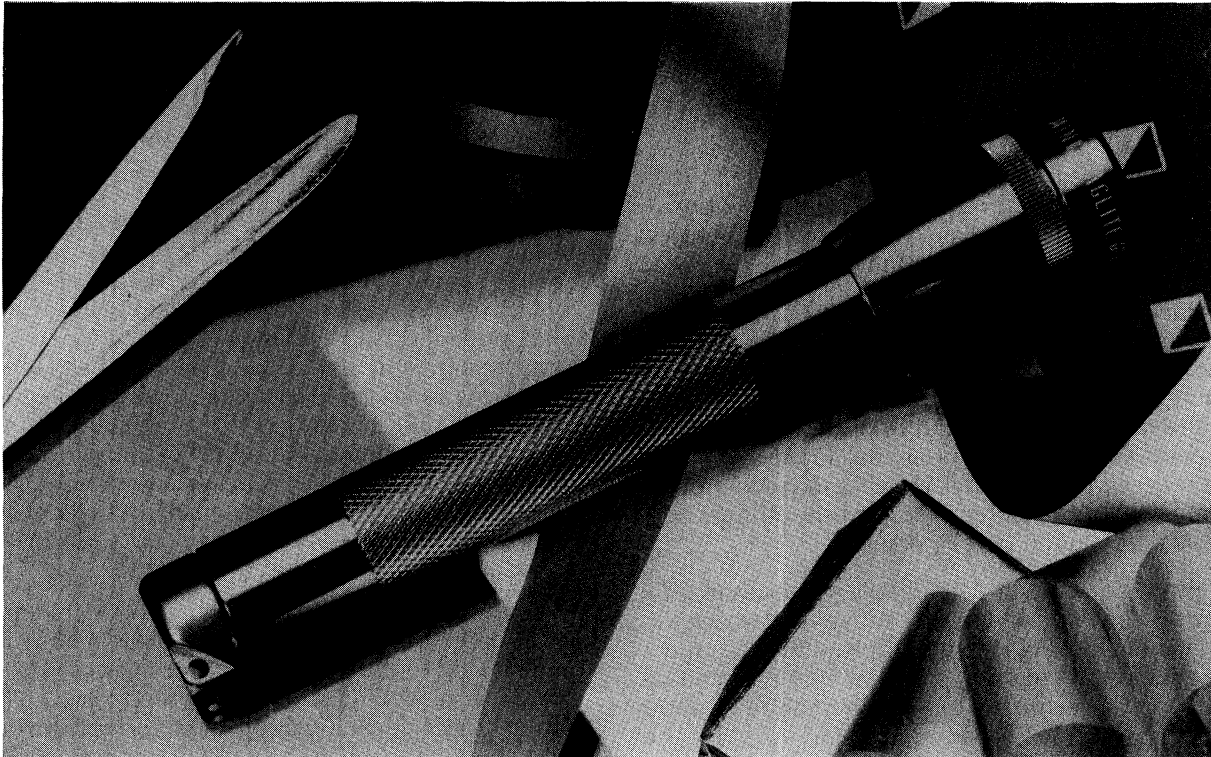
Results

Manipulation Check. Following guidelines suggested by Perdue and Summers (1986), a separate sample of 53 undergraduates received stimulus materials and instructions that were identical to those in the experiment, with the exception that the dependent variables and looking time were not measured. Immediately after viewing an ad, subjects rated it on five items. As shown in Table 3, the resonant versions of each ad were rated as significantly more incongruous and polysemous than the nonresonant ads, and the consistent-resonant versions were rated as more positive than the inconsistent-resonant versions (p 's < .001). These findings hold

¹²While not reported here, analysis of a four-factor analysis of variance design with blocks (eight levels, corresponding to the eight booklets, each using a different rotation of stimuli) by order (four levels, corresponding to an ad's position within the sequence of four test ads) by ads (four levels) by resonance (three levels) produced the same pattern of findings. Moreover, examination of the means for the 12 stimuli in Table 2 indicates that in no case is a within-subjects treatment effect dependent on one or two stimuli. Only the within-subjects analysis is reported here because it has more power (the four nonresonant ad versions were each rated by one-half of the sample, while the eight resonant ad versions were each rated by only one-fourth of the sample). The complete results, including adjusted means for individual ad versions, are available from the authors.

FIGURE 1

AN EXAMPLE OF THE AD STIMULI USED IN THE EXPERIMENTS



THE GIFT IDEA THAT LEAVES EVERYBODY BEAMING

MINI LITE

NOTE.—The figure shows the consistent-resonant version of the flashlight ad. See Table 2 for the text headlines used in the inconsistent-resonant and nonresonant versions. The photograph originally appeared in an ad for the MagLite brand (used by permission of Mag Instrument, Inc.).

true for each of the four source ads as well as in the aggregate. Inspection of the individual means for each of the 12 stimuli described in Table 2 showed that this pattern of findings held both for the resonant headlines

based on actual ads and for the resonant headlines we developed.

Treatment Effects. As predicted, the resonant ads were better liked than the nonresonant ads ($\bar{X}_{RES} = 5.09$,

TABLE 3
MANIPULATION CHECK: COMPARISONS OF RESONANT AND NONRESONANT AD VERSIONS

Formal properties	Resonant		Not resonant
	Consistent	Inconsistent	
Polysemy:			
1. The ad had multiple meanings/one meaning	5.9	6.6	3.4
2. The ad had a rich and complex meaning/simple meaning	4.6	4.9	3.0
Incongruity:			
3. The ad had a twist to it/was straightforward	4.8	5.2	3.6
4. The ad used words in an odd way/ordinary way	6.2	5.6	3.5
Valence:			
5. All meanings expressed in the ad were positive/at least one was negative	6.9	3.8	6.1

NOTE.—*N* = 53. Scale maximum was 9; higher numbers indicate more of the property. All comparisons of resonant vs. nonresonant versions were significant at *p* < .001.

$\bar{X}_{NRES} = 4.78, F(1,111) = 5.64, p < .01$, one-tailed; $\eta^2 = .05$). However, Hypothesis 2 was not supported; the interaction between tolerance for ambiguity and resonance was not significant (*p* > .25).

Brand attitude was also more positive in the case of resonant ads ($\bar{X}_{RES} = 4.99, \bar{X}_{NRES} = 4.78, F(1,111) = 3.39, p < .05$, one-tailed; $\eta^2 = .03$). Findings for the measure of counterarguing suggest that brand attitude is more positive in part because subjects counterargue less when presented with resonant ads ($\bar{X}_{RES} = 4.79, \bar{X}_{NRES} = 4.22, F(1,111) = 13.2, p < .001$, one-tailed; $\eta^2 = .11$; higher numbers indicate less counterarguing). However, Hypothesis 5 was not supported; as can be seen in Table 4, inconsistent-resonant ads that include negative as well as positive meanings produced a brand attitude rating that is almost identical to that for consistent-resonant ads.

In support of Hypothesis 6, recall for headlines was higher in the case of resonant ads ($\chi^2(1) = 12.1, p < .001$; Cramer's statistic = .16). To control for looking times, we made recall the dependent variable in a logistic regression and forced the entry of looking time. The relationship between looking time and headline recall was positive and significant (Wald's statistic = 11.3, *p* < .001). Using a nested models approach, we next entered the resonance treatment. This produced a significant improvement in model fit (χ^2 difference (2)

TABLE 4
CELL MEANS FOR DEPENDENT MEASURES IN EXPERIMENT 1

Dependent measure	Resonant		Not resonant
	Consistent	Inconsistent	
Ad liking:			
Tolerant of ambiguity ^a	5.10	4.91	4.90
Intolerant of ambiguity	5.15	5.19	4.67
Brand attitude	4.99	4.98	4.78
Reduction in counterarguing ^b	4.72	4.85	4.22
Recall	.24	.31	.14

NOTE.—*N* = 112. Scale maximum, except for recall, was 7.

^aSplit at the median. The median score in this sample was 45, relative to a theoretical mean of 48.

^bHigher numbers indicate agreement with or acceptance of the point made in the ad.

= 14.6, *p* < .001).¹³ Thus, the resonant treatment improved headline recall even after controlling for looking time. In fact, there was no significant difference in looking time between the resonant and nonresonant ad versions ($\bar{X}_{RES} = 12.71$ seconds, $\bar{X}_{NRES} = 12.75$ seconds, *p* > .9).

Confound Checks. To accept the resonance manipulation as the explanation for the observed treatment effects, it is necessary to rule out the possibility that it was the substituted words that actually caused the effect, perhaps because they themselves are more positive and more memorable. To explore this possible confound, we took the 12 words or phrases that differentiated the 12 stimuli in Table 2 (e.g., for the flashlight ad, “beam-ing,” “happy,” and “light up”), and embedded them within a list that totaled 24 words. Thirty-two undergraduates rated each word on a 10-point scale anchored by “very positive word” and “very negative word” (two counterbalanced orders were used). After a filler task, (an unrelated 10-minute classroom lecture), subjects were then asked to recall (unaided) as many of the 24 words as possible. Results showed that the words that differentiated the resonant ads were actually judged to be significantly less positive than those contained in the nonresonant ads ($\bar{X}_{RES} = 5.8, \bar{X}_{NRES} = 6.5, t = -4.1, p < .001$). If only those differentiating words used in the consistent-resonant headlines are compared with the differentiating words in the nonresonant headlines (recall that the consistent-resonant ads, as compared with the inconsistent-resonant ads, have univalent positive meanings), there is no difference in positivity ($\bar{X}_{CRES} = 6.48, \bar{X}_{NRES} = 6.48$). In addition, there was significantly less recall for the differentiating words used in

¹³The resonance treatment was entered as two sets of contrast codes, using SPSS Release 4.0. Reported results are for the treatment as a whole; the effect of consistent versus inconsistent resonance on headline recall was nonsignificant.

the resonant ad headlines as compared with those in the nonresonant headlines (17 percent vs. 35 percent). This confound check increases our confidence that the positive treatment effects for resonant ads in the experiment can be attributed to variation in the formal properties characteristic of resonance and not to features of the individual words that differentiated resonant from nonresonant headlines.

In a second confound check we investigated further whether there were properties of the stimuli other than resonance that might provide an alternative explanation for the treatment effects. One plausible rival hypothesis would point to variations in the vividness of individual stimuli as a factor that could explain why resonant ads were liked and recalled better than nonresonant ads (McGill and Anand 1989; Unnava and Burnkrant 1991). The ad booklets used in experiment 1 were given to 35 student subjects. Each subject rated the ads on 10-point scales using three items from Unnava and Burnkrant (1991): vivid-dull, concrete-abstract, and stimulates—does not stimulate images. A related means *t*-test, conducted on the sum of the three items, showed virtually no difference in vividness between the resonant and nonresonant ads ($\bar{X}_{RES} = 5.00$, $\bar{X}_{NRES} = 5.07$, $t = -.18$, NS). This confound check indicates that there was no inadvertent manipulation of vividness consequent to creating the resonant and nonresonant treatments. In addition, subjects completed two items designed to test the credibility of the resonant and nonresonant ads: "The style of this ad seems strange/is familiar," and "The selling approach used in this ad is unusual/typical." A comparison of means using the sum of these two items ($r = .79$) showed no significant difference between the resonant and nonresonant treatments ($\bar{X}_{RES} = 5.52$, $\bar{X}_{NRES} = 5.53$).

Discussion

Contrary to criticisms that wordplay is too indirect to be persuasive, the results show that resonance leads to more liking for the ad, a more positive brand attitude, and better recall of ad headlines. As suggested by Berlyne (1971), it is pleasurable to encounter an ad that both demands to be decoded and suggests how this decoding is to proceed. Resonance in advertising appears to have intrinsic reward value beyond any brand-relevant information that may be imparted.

We also found that resonant ads can produce more positive brand attitudes in a context of attitude formation. The results support a partial explanation in terms of reduced counterarguing under conditions of resonance. Unexpectedly, the valence of the meanings contained in the resonance had no effect on brand attitude. That is, both inconsistent-resonant ads (that include at least one negative meaning) and consistent-resonant ads led to equally positive brand attitudes. The pleasure created by decoding resonance and the reduced counterarguing occasioned by resonance seem to coun-

teract or overwhelm the impact of any negative meanings in inconsistent-resonant ads. This suggests that the experience of resonance per se may be more important than the valence of the meanings encompassed in the resonance. A similar finding was reported by Hitchon (1991) using positively and negatively valenced metaphors.

We found that resonance enhanced the memorability of ad headlines. Pretesting showed that the resonant ads used in this study were not rated as more puzzling (suggesting they were not more difficult to comprehend), and the experiment showed that resonant ads were not looked at any longer. Moreover, the confound check showed that the key words in the resonant headlines were not in themselves more memorable, nor were the resonant stimuli any more vivid or familiar. Hence, increased recall for headlines of resonant ads can be attributed to the evocation of a greater number of semantic chains or associational pathways. Superior recall for resonant ads is consistent with the hypothesis that resonance induces additional interpretation in the sense of deeper processing (Anderson and Reder 1979). This decoding process is pleasurable, serves to reduce counterarguing, and facilitates information retrieval. The finding for recall is parallel to that previously reported for interactive imagery (Childers and Houston 1984; Lutz and Lutz 1977), and it is consistent with predictions from the polysemous and incongruous character of resonant ads.

Although this experiment provides important new information about advertising resonance and support for the prior semiotic text analysis, several issues remain unresolved. The null finding for tolerance for ambiguity might result from a high degree of homogeneity among students with respect to this individual difference variable. Along similar lines, the treatment effects for resonance might be an artifact of using students, who may be more comfortable with clever and intellectually stimulating material than the general population. Hence, a replication of the experiment with a nonstudent population was indicated.

In developing Hypothesis 1 we argued that a "pleasure of the text" results from the successful decoding of advertising resonance. However, this issue was not directly examined in experiment 1, in which all the resonant ads were constructed to be readily comprehensible. In experiment 2 we include a manipulation of resonance comprehensibility to examine more closely whether the positive treatment effects for resonance disappear when successful decoding is impeded.

EXPERIMENT 2

Method

A commercial market research firm was hired to recruit adult participants for a study of print ads. Recruiters were instructed to seek a rough balance of gen-

der and age groups and to exclude full-time college students. Each participant ($n = 107$) attended a 30-minute session, for which s/he was paid \$15.00. Usable forms were obtained from 98 subjects. Fifty percent were female and 49 percent were over 35 years of age. The procedures used in this replication, including the stimuli, the sequencing of activities, and the experimental design, were largely identical to those described in experiment 1. The exceptions were that the event recorder was not used, subjects participated in larger groups of 7–12, and a total of 12 rather than eight orders of stimuli were used. In addition, a message comprehension check was conducted as described below. Measures of attitude toward the ad, brand attitude, counterarguing, and recall were administered exactly as before, as was the measure of tolerance for ambiguity.

Results

Treatment Effects. All of the significant treatment effects found in the student sample were replicated in the adult sample (Table 5). As before, the resonant ads were better liked than the nonresonant ads ($\bar{X}_{RES} = 5.24$, $\bar{X}_{NRES} = 4.82$, $F(1,96) = 5.75$, $p < .01$, one-tailed; $\eta^2 = .06$). This time, however, a significant interaction between resonance and tolerance for ambiguity was obtained ($F(2,95) = 3.24$, $p < .05$, two-tailed; $\eta^2 = .06$). The interaction is largely driven by reactions to the inconsistent-resonant versus the nonresonant treatments (Table 5), providing partial support for Hypothesis 2. Subjects high and low in tolerance for ambiguity responded in opposite ways to these treatments.

Brand attitude was again more positive for resonant ads ($\bar{X}_{RES} = 5.27$, $\bar{X}_{NRES} = 5.04$, $F(1,97) = 2.03$, $p < .08$, one-tailed; $\eta^2 = .02$). Findings for the measure of counterarguing are consistent with the idea that brand attitude is higher for resonant ads because counterarguing is lower ($\bar{X}_{RES} = 5.12$, $\bar{X}_{NRES} = 4.53$, $F(1,97) = 7.11$, $p < .005$, one-tailed; $\eta^2 = .06$; higher numbers indicate less counterarguing). Once again, brand attitude did not significantly differ between consistent- and inconsistent-resonant treatments ($p > .25$).

As before, recall for headlines was higher for resonant ads as compared with their nonresonant controls ($\chi^2 = 7.74$, $p < .01$; Cramer's statistic = .14). As had been the case in experiment 1, recall for resonant headlines was approximately twice as high as it was for the nonresonant headlines.

Message Comprehension Check. One means of checking the validity of the semiotic explanation of resonance is to see whether the treatment effects no longer obtain once the decoding process is inhibited. For experiment 2 we added two new ads, for skiwear and for marinade, immediately following the four test ads in place of the filler ads that had occupied positions 9 and 10 in the experiment 1 sequence. Pretest interviews with a convenience sample of adults had indicated that these two new ads were comparatively more difficult to un-

TABLE 5
CELL MEANS FOR DEPENDENT MEASURES IN EXPERIMENT 2

Dependent measure	Resonant		Not resonant
	Consistent	Inconsistent	
Ad liking:			
Tolerant of ambiguity ^a	5.33	5.48	4.51
Intolerant of ambiguity	5.40	4.84	5.06
Brand attitude	5.37	5.16	5.04
Reduction in counterarguing ^b	5.20	5.03	4.53
Recall	.24	.28	.14

NOTE.— $N = 98$.

^aSplit at the median. The median score in this sample was 44, relative to a theoretical mean of 48 and a median of 45 in the student sample used in experiment 1.

^bHigher numbers indicate agreement with or acceptance of the point made in the ad.

derstand. For each of these ads we developed a nonresonant control.¹⁴ In experiment 2, an individual subject saw the resonant version of one ad and the nonresonant version of the other. All four possible combinations of pairs and orders were used an equal number of times across the 12 booklets.

A comprehension measure served as a manipulation check to determine whether these new ads (hereafter referred to as the “supplemental” as opposed to the “main” set of test ads) were more difficult to decode. This measure consisted of two items: “I had difficulty understanding/easily understood the ad,” and “I found the ad straightforward/confusing.” These two items ($r = .87$) were summed to create the comprehension measure. Results showed that for the subjects in experiment 2 only the skiwear ad showed the expected difficulty in comprehension, compared with both its nonresonant control ($\bar{X}_{RES} = 3.33$, $\bar{X}_{NRES} = 5.55$, $t = 5.35$, $p < .001$) and with the main set of resonant ads ($\bar{X}_{RES-MAIN} = 5.54$, $p < .001$). Contrary to our expectations, both the resonant and the nonresonant versions of the marinade ad were about equally comprehensible ($\bar{X}_{RES} = 5.55$, $\bar{X}_{NRES} = 5.49$, $p > .75$).

As would be expected from the semiotic text analysis, in a comparison of the resonant and nonresonant versions of the skiwear ad, the treatment effects for resonance disappeared or even reversed. The resonant version was liked significantly less ($p < .01$), brand attitude was significantly lower ($p < .05$), and counterarguing was significantly higher ($p < .001$). Recall of the resonant ad headline was lower (39 percent vs. 45 percent

¹⁴The skiwear ad shows a downhill skier almost enveloped in a cloud of snow with the headline “Smoking Permitted in This Area Only.” For the nonresonant control we replaced “smoking” with “speeding.” The marinade ad shows three trout on a colorful dinner plate with the headline “Paint a Rainbow.” For the nonresonant control we rewrote the headline as “Baste a Fish.”

for the nonresonant version), but the difference was not statistically significant. In contrast, for the resonant marinade ad, which was unexpectedly as comprehensible as the main set of resonant ads, comparisons were consistent with those reported earlier. Both ad liking and brand attitude were significantly higher ($p < .05$) for the resonant marinade ad as compared with its nonresonant control. Less counterarguing and greater recall were also observed for the resonant version, but the differences were not statistically significant.

Discussion

Experiment 2 shows that the positive treatment effects for resonance are generalizable to an adult population that differs in age and life circumstances from the students in experiment 1. The results extend experiment 1 by showing that, within a more diverse population, the treatment effect on ad liking is contingent on tolerance for ambiguity, particularly for inconsistent-resonant ads. Most important, the findings provide additional support for the semiotic explanation of resonance, which stresses the pleasure that results from successful decoding. It appears that, when decoding is inhibited, as in the case of the skiwear ad, the positive effects for resonance no longer obtain. However, this conclusion must remain tentative, as we were only able to investigate this issue with a single supplemental ad.

Taken together, the findings related to tolerance for ambiguity and resonance comprehension begin to delineate the boundary conditions under which resonance can be an effective device. These are but two examples of how the motivation and ability to process a resonant ad may limit the impact of resonance. Future research might examine other boundary conditions based on individual differences, for example, the consumer's level of involvement in the product class, optimal stimulation level, need for cognition, cognitive style, or appreciation for humor.

A shortcoming of both experiments is that they do not reveal the actual meanings consumers construct for the resonant ads, nor do they show whether consumers' interpretations correspond to any degree with the semiotic text analyses presented earlier. Although such neglect of consumer's own meanings is a common occurrence in advertising experiments, as part of this critical pluralistic inquiry we conducted phenomenological interviews to capture consumers' personal experience of resonance.

PHENOMENOLOGICAL INTERVIEWS

Twelve informants were recruited for a study of advertising. Five were undergraduate students (two females, three males) who received extra course credit for participation, and seven were adults from the local community (ages 26–55; three females, four males) who were paid \$3.00. Each interview lasted about 30 minutes

and was conducted by a female research assistant experienced in phenomenological interviewing (see Thompson, Locander, and Pollio 1989). Eight ads were shown during the interview; two were nonresonant, with one serving as a warm-up and the other as a filler ad. The six resonant ads included the same six advertiser-created headlines and pictures used in experiment 2 (see Table 2 and n. 15 above), including the two ads initially thought to be more difficult to comprehend (marinade and skiwear). As each ad was displayed, the assistant asked, "What does this ad say to you?" The ensuing dialogue was emergent, led by the informant's own focus and comments, and concluded when the informant appeared to have exhausted the meanings of that particular ad for him/her. After the interviews were transcribed, the authors worked as a team to interpret them (see Thompson et al. 1989). This involved looking for instances in which consumers noted advertising resonance and for meanings that conformed with, augmented, or were at variance with the prior semiotic text analyses. Unlike a typical and strictly phenomenological project that reproduces large portions of interview sequences, our intent here is to reveal illustrative comments that reflect the experience of resonance by various informants. Because of space limitations, we reproduce only abbreviated verbatim quotes to convey that experience.

Table 6 displays exemplary verbatims that reveal how informants experienced the main set of four resonant ads used in both experiments. As can be seen from the quotes, the category "play on words" is experientially real and forms part of the everyday vocabulary used by ordinary consumers to describe ads. Perusal of the transcripts also pointed to "cute," "clever," and "catchy" as other terms used by consumers who encounter resonance. The pleasure produced by successfully decoding resonance is apparent in remarks such as "It's a play on words, I like that" and "The play on words makes it interesting."

The interviews also shed some light on the experiments' failure to confirm the hypothesis that inconsistent-resonant ads would produce a less favorable brand attitude. Informants' sophistication concerning the conventions or genre rules of advertising (Scott 1990; Stern 1989) may have caused them to discount or edit out the negative meaning(s) contained in the inconsistent-resonant ads, as seen in this remark: "Holding up a bank means robbing, I don't know if that was intentional, somehow I doubt it." Perhaps informants expected the ads to convey positive, brand-relevant meanings and, hence, were motivated to interpret the negative meanings creatively in a more positive manner, as these comments on the tea ad suggest: "It would be fun if the ad made it that this tea would get you into trouble because you enjoy it so much that you forget all about other things," and also "Maybe when you drink this it's kind of mischievous." The ad experiences of these informants thus offer a plausible explanation

TABLE 6
THE EXPERIENCE OF RESONANT ADS AS UNCOVERED THROUGH PHENOMENOLOGICAL INTERVIEWS

Product	Headline	Quotes
Tea	Get Yourself into a Lot of Hot Water	"It says it's tea time. . . . Oh, getting into hot water means something you're not supposed to do." (Female, age 55) "It's a play on words. Get yourself in a lot of hot water, and they got a zillion different kinds of tea." (Female, age 35)
Telephone	Chances Are We're Holding Up Your Bank	"Chances are we're holding up your bank, the telephones are the backbone of the bank, but the holding up of your bank phrase is like the Westerns when they hold up the bank, so it seems like a play on words." (Male, age 30) "They're making the association between this column holding up the bank—the phones being support that holds up the bank. . . . On the other hand, holding up a bank also means robbing a bank." (Male, age 26)
Flashlight	The Gift Idea That Leaves Everybody Beaming	"It leaves everybody beaming, beam relates to the flashlight, it throws out a beam of light. And when people are happy from getting a gift, their faces start beaming with happiness." (Male, age 20) "It leaves everybody beaming, that means it leaves everybody happy, that gives me a smile on my face. Because I'd like to beam, I'd like to be happy, I'd like to glow, and what does a flashlight do? Hey! It beams, it glows." (Female, age 44)
Diet dessert	Berried Treasure	"Looks very luxurious like only the best can eat. Looks like strawberry and whipped cream. The berried treasure, one of the greatest things you'll find, something like a secret." (Female, age 19) "Treasure is something everybody wants, and every sane person I know wants strawberry shortcake. . . . If I eat this, I'm going to be rich." (Female, age 44)

NOTE.—Based on 12 interviews with male and female students and adults.

of why inconsistent-resonant ads did not produce less favorable brand attitudes among the experimental subjects.

Informants' experience of the two supplemental ads introduced in experiment 2 conforms to the results of the comprehension check reported there. For the marinade ad, several informants made the connection to rainbow trout while commenting on the colors in the picture: "It's a play on words . . . it's a rainbow trout and it's very colorful" [female, age 35]. The skiwear ad, by contrast, baffled informants.

I don't get it . . . it's so hot it's smoking cool? I don't get it, I just don't get it. [Male, age 30]

That is pretty dumb . . . I mean you don't smoke in snow, you get smoke plus snow equals mush. [Female, age 35]

I wasn't quite sure what this was . . . a situation that would be as ludicrous as this . . . the phrase hasn't anything to do with the picture. [Male, age 26]

A few informants were able to construe "smoking" as an expression for skiing fast, but even these people tended not to connect "smoking" to the cloud of snow depicted in the ad. From a semiotic perspective, the skiwear ad is probably a *closed* text for most consumers (Eco 1979). Closed texts are prone to aberrant readings, as the "smoke plus snow equals mush" and "so hot it's smoking cool" comments illustrate. In contrast, the successful resonant ad functions as a true *open* text that assists the reader toward meanings that have been strategically predisposed through envisioning the reader and

his/her codes at the time the text and its signs were structured.¹⁵

One of the most interesting results of the phenomenological interviews was the emergence of meanings not anticipated in our semiotic text analysis. For instance, one informant connected "beaming" in the flashlight ad to the gold colors in the holiday wrapping and to the conventional symbol for a good idea, that is, a light-bulb going off in someone's head as they grasped this gift "idea." Another person read "holding up your bank" in terms of "blockages . . . holding things up, keeping things from running smoothly." From the standpoint of semiotic text analysis, both of these examples represent legitimate readings insofar as they are sensible and linked to the ad's signs. These unanticipated readings serve as a powerful reminder that meanings do not inhere in a text but are produced via an encounter between a real reader (whether academic or consumer) and a text that incorporates decoding constraints via sign structure (cf. Mick and Politi 1989).

GENERAL DISCUSSION

Resonance in print ads often takes the form of word-play in the presence of a relevant, reinforcing pictorial. A content analysis of recent magazine ads showed that resonance is a common occurrence, present in about 15 percent of the ads examined. Semiotic text analysis

¹⁵Of course, had we interviewed a group of ski enthusiasts rather than a cross-section of adults, then the skiwear ad might have been an open rather than a closed text.

developed the manner by which multiple meanings are conveyed through such resonance. Two experiments showed that resonance leads to more liking for the ad, a more positive brand attitude, and better recall of ad headlines. Effect sizes in these experiments ranged from low (.02) to moderate (.16) by Cohen's (1988) standards. Confound checks cast doubt on rival hypotheses that resonant ads achieved their impact by being more vivid or familiar or by including more positive and memorable words. In experiment 2, the addition of two supplemental ads and a message comprehension check supported the semiotic explanation that successful decoding of resonance is necessary to produce its positive incremental effects on attitudes and memory. Experiment 2 also showed that the effects of resonance depend to some degree on subjects' tolerance for ambiguity—an individual difference variable. Phenomenological interviews conducted to supplement the two experiments showed that consumers' personal experience of resonant ads converged with our prior semiotic text analyses. In summary, over the course of this project we employed multiple methods and used appropriate appraisal standards (e.g., interjudge agreements, manipulation and confound checks, experimental replication, displays of interview data, and triangulation across sources, researchers, and methods) to investigate resonance. Taken as a whole, this project illustrates how critical pluralism can contribute to consumer research on advertising.

The semiotic text analysis laid the foundation for the project. Had we not made use of semiotics, the later experimental work might have rested strictly on a view of resonance as a peripheral cue, consistent with the information-processing tradition in consumer research (see, e.g., MacInnis, Moorman, and Jaworski 1991; Petty, Cacioppo, and Schumann 1983). While adequate for formulating experimental manipulations, we would argue that to approach resonance only as a cue is to adopt an impoverished perspective in comparison with a semiotic analysis that views resonance as a sophisticated form of rhetoric comprising a complex sign structure (cf. Scott's [1990] critique of conventional research on music in advertising). While both cue and sign are flexible concepts that are useful across a broad range of research applications, the concept of sign has three notable advantages: signs and their functions are structurally differentiated; signs combine according to rules to form texts; and signs are embedded within a socio-cultural context. An intended contribution of this study was to show how semiotics, as the science of signs, can contribute to consumer research through identifying and explicating hitherto neglected phenomena such as resonance.

A secondary but important intent of this study was to move semiotic advertising research beyond the sphere of "mere" interpretation (Barthes 1985; Williamson 1978) to one in which the assumptions and claims made through semiotic text analysis are examined and tested

empirically using other methods. Each of these additional methods enhanced the legitimacy of the semiotic text analyses. The content analysis of a large probability sample of magazine ads forestalls the criticism that acting as semioticians we seized on a few special cases unusually rich in meaning. The experimental work averts the criticism that the arabesques of text analysis beloved by semioticians are irrelevant to the causal impact of advertising on consumers. The phenomenological interviews address the criticism that the semiotic text analyses, however interesting or valid on their own terms, can reflect only the idiosyncratic perceptions of semiotic analysts. Critical pluralism also shows how the three supplements to the semiotic text analysis are mutually reinforcing. The content analysis of magazine ads mitigates the artificiality of the laboratory stimuli and provides real-world examples to which the experimental results apply, while the phenomenological interviews illuminate, in humanistic terms and less obtrusively, what the experiments tested.

In conclusion, this critical pluralistic study marks a clear departure from more conventional applications of semiotics. While many semioticians assert or imply that their text interpretations are immanent in the sign structure and need no cross-validation, we think this refusal can only limit and retard the theoretical and methodological contributions of semiotics to consumer research.

Limitations

Resonance is an aspect of the form or style of an ad that results from a specific structural relation among signs within the text of that ad. We note that skepticism has been voiced about the possibility of successfully manipulating form apart from content. Although it may not be possible to manipulate form without any accompanying changes in content elements, in our opinion the advantages of causal designs for theory building and testing are a strong motivation to attempt the manipulation of form. However, a limitation of our study remains the possibility that something other than resonance was manipulated when we changed words in the headlines. The use of multiple source ads, careful calibration of stimuli through pretests and manipulation and confound checks, and a predictable pattern of results across multiple dependent measures in two experiments can deflect, but not entirely dismiss, this threat to validity.

A second limitation stems from the use of the experimental method to investigate phenomena developed through semiotic text analysis. In an effort to enhance the internal validity of the study, we removed from the stimuli several content elements and formal properties that normally characterize magazine ads. The experimental stimuli contained no body copy, no brand logo, and no tag line. All stimuli used the same layout, and all headlines and brand names used the same type-

face and point size. Similarly, although subjects were instructed to approach the ads naturally, as if they were reading a magazine, in fact the laboratory setting used differs considerably from natural viewing contexts, most notably in the use of buttons attached to an event recorder, paper and pencil rating scales immediately following the viewing of ads, and the high degree of task involvement typical of experiments. Many semioticians would question whether investigation of such stimuli in laboratory contexts can advance theorizing about everyday encounters with advertising rhetoric or about the impact of stylistic elements in general. The reply to these objections, while familiar, bears repeating here in light of our commitment to pluralistic perspectives and methods: that there can be no substitute for the experimental method when causal analysis is among the goals of a research program. We believe that advertising resonance and similar stylistic elements such as drama (Wells 1988) and music (Scott 1990) are both deserving of and responsive to experimental analysis.

A final limitation stems from our agenda in this study, which was theoretical and methodological rather than prescriptive. Our concern was to identify and explicate a specific rhetorical feature and then compare ads in which this feature had been removed against the same ads with the feature left intact, in accordance with a research strategy for humor originally suggested by Sternthal and Craig (1973). The experiments confirmed that successfully decoded resonant ads can have certain positive, incremental effects on attitudes and memory, relative to the same ads without resonance. But to show that resonant ads outperformed their nonresonant controls by no means suggests that resonance is necessarily the best possible rhetorical technique relative to others (e.g., brand comparisons, celebrity endorsements, etc.). For normative guidelines on the strategic use of resonance, see McQuarrie (1992).

Future Research

Future research might examine the relationship between resonance and other forms of advertising rhetoric. An important question concerns how many of the effects of resonance are peculiar to it and how many are shared with other rhetorical figures. The best strategy for distinguishing among the effects proper to different types of rhetoric would appear to be experimental investigations of resonance, metaphor, metonymy, and other rhetorical figures that occur often enough in advertising to warrant comparative research (see, e.g., Gibb's [1990] comparison of metonym and metaphor). Only then can we learn which effects are common to all nonliteral utterances and which are distinctive to specific rhetorical figures such as resonance.

Beyond empirical comparisons with other rhetorical figures, there is also the opportunity further to refine the concept of resonance. Researchers can draw on a rich tradition in literary criticism for insights as to pos-

sible taxonomies (Empson 1973; Heller 1974; Redfern 1985). In addition, reader-response theory (Scott 1990), the anthropology and psychology of humor (Douglas 1968), and psycholinguistic research on metaphor (Hoffman 1984) could each be a fruitful source of hypotheses. For example, Sheldon (1956, pp. 16 ff.) distinguished between loud and quiet puns. Loud puns make major modifications to conventional spelling or usage (e.g., a shampoo with egg that is "eggs-tra good for your hair"), in contrast to quiet puns, which depend more on an interplay of meanings produced without such blatant modification (e.g., "beaming" in the flashlight ad). A task for future research is to determine whether loud and quiet puns differ in effectiveness.

Different modes of resonance could also be compared. For instance, McQuarrie (1989) identified a purely visual form of resonance, in addition to the verbal-visual resonance studied here. In light of the attention now being focused on picture-based persuasion processes (Miniard et al. 1991; Unnava and Burnkrant 1991), it would be interesting to see whether the same effects result when polysemy and incongruity occur on the visual level without accompanying wordplay in the headline. As an example, McQuarrie (1989) discusses an ad for Crest in which the toothpaste on the brush has the same shape as (i.e., echoes the meaning of) the dentist's pick shown just above it. Manipulations of such pictures could test the incremental effects of purely visual resonance.

CONCLUSION

Among the merits of the concept of resonance is that it expands the horizon of consumer advertising theory through incorporating semiotic ideas. Under the dominant alternative to semiotics—the information-processing perspective (e.g., MacInnis and Jaworski 1989)—the tools and resources available for conceptualizing formal structure seem limited. Those aspects of an ad that do not directly transmit brand-relevant information using rational arguments tend to be lumped together as peripheral cues, a catchall category in need of more refined theoretical differentiation. By contrast, a key virtue of semiotics is the concepts and analytic tools it offers for distinguishing and understanding formal aspects of texts such as magazine ads. Consistent with work by Mick (1986), Scott (1990), Stern (1989), and Wells (1988), we have argued in this article that form matters; that is, small changes in ad form can have measurable impact on consumer response, and the nature of this response can be partly anticipated by analyzing the form itself.

This article is consistent with recent efforts in consumer research to broaden paradigms beyond a strictly positivist approach. An unfortunate consequence of the struggle to establish the legitimacy of interpretivist perspectives has been an increased polarization in the discipline (Hunt 1991). However, like the work of O'Guinn

and Faber (1989) and Wallendorf and Arnould (1991), our results testify to the value of a critical pluralism that seeks to combine the best of positivism and interpretivism (Hunt 1991; Lutz 1989). While the interpretivist tradition afforded us rich resources for the conceptualization, text analysis, and phenomenological investigation of advertising resonance, the positivist tradition provided useful tools for establishing its prevalence and effects. Both are necessary to advance advertising theory and the understanding of substantive phenomena such as advertising rhetoric.

[Received April 1991. Revised March 1992.]

REFERENCES

- Anderson, John R. and Lynne M. Reder (1979), "An Elaborative Processing Explanation of Depth of Processing," in *Levels of Processing in Human Memory*, ed. Laird S. Cermak and Fergus I. M. Craik, Hillsdale, NJ: Erlbaum.
- Anderson, Paul F. (1986), "On Method in Consumer Research: A Critical Relativist Perspective," *Journal of Consumer Research*, 13 (September), 155-173.
- (1988), "Relativism Revidivus: In Defense of Critical Relativism," *Journal of Consumer Research*, 15 (December), 403-406.
- Barthes, Roland ([1964] 1985), "The Rhetoric of the Image," in *The Responsibility of Forms*, New York: Hill & Wang, 21-40.
- Beltramini, Richard F. and Vincent J. Blasko (1986), "An Analysis of Award-winning Headlines," *Journal of Advertising Research*, 26 (April-May), 48-52.
- Berlyne, Daniel E. (1971), *Aesthetics and Psychobiology*, New York: Appleton-Century-Crofts.
- Budner, S. (1962), "Intolerance of Ambiguity as a Personality Variable," *Journal of Personality*, 30, 29-50.
- Celsi, Richard L. and Jerry C. Olson (1988), "The Role of Involvement in Attention and Comprehension Processes," *Journal of Consumer Research*, 15 (June), 4.
- Childers, Jerry L. and Michael J. Houston (1984), "Conditions for a Picture Superiority Effect on Consumer Memory," *Journal of Consumer Research*, 11 (September), 643-654.
- Cohen, Jacob (1988), *Statistical Power Analysis for the Behavioral Sciences*, Hillsdale, NJ: Erlbaum.
- Deighton, John, Daniel Romer, and Josh McQueen (1989), "Using Drama to Persuade," *Journal of Consumer Research*, 16 (December), 335-343.
- Douglas, Mary (1968), "The Social Control of Cognition: Some Factors in Joke Perception," *Man*, 3 (3), 361-376.
- Durand, Jacques (1987), "Rhetorical Figures in the Advertising Image," in *Marketing and Semiotics: New Directions in the Study of Signs for Sale*, ed. Jean Umiker-Sebeok, New York: Mouton de Gruyter, 295-318.
- Dyer, Gillian (1982), *Advertising as Communication*, New York: Methuen.
- Eco, Umberto (1976), *A Theory of Semiotics*, Bloomington: Indiana University Press.
- (1979), *The Role of the Reader*, Bloomington: Indiana University Press.
- (1984), *Semiotics and the Philosophy of Language*, Bloomington: Indiana University Press.
- Empson, William (1973), *Seven Types of Ambiguity*, Harmondsworth: Penguin.
- Fox, Stephen (1984), *The Mirror Makers: A History of American Advertising and Its Creators*, New York: Morrow.
- Gibbs, Raymond W. (1990), "Comprehending Figurative Referential Descriptions," *Journal of Experimental Psychology—Learning, Memory and Cognition*, 16 (January), 56-66.
- Glucksberg, Sam and Boaz Keysar (1990), "Understanding Metaphorical Comparisons: Beyond Similarity," *Psychological Review*, 97 (January), 3-18.
- Grinnell, J. D. (1987), *National Register of Advertising Headlines and Slogans*, Westbury, NY: Asher-Gallant.
- Heller, L. G. (1974), "Towards a General Typology of the Pun," *Language and Style*, 7, 271-282.
- Hirschman, Elizabeth C. (1985), "Scientific Style and the Conduct of Consumer Research," *Journal of Consumer Research*, 12 (September), 225-239.
- and Morris B. Holbrook (1980), *Symbolic Consumer Behavior*, Provo, UT: Association for Consumer Research.
- Hitchon, Jacqueline (1991), "Effects of Metaphorical vs. Literal Headlines on Advertising Persuasion," in *Advances in Consumer Research*, Vol. 18, ed. Rebecca H. Holman and Michael Solomon, Provo, UT: Association for Consumer Research, 752-753.
- Hoch, Stephen J. and Young-Won Ha (1986), "Consumer Learning: Advertising and the Ambiguity of Product Experience," *Journal of Consumer Research*, 13 (September), 221-233.
- Hoffman, Robert R. (1984), "Recent Psycholinguistic Research on Figurative Language," *Annals of the New York Academy of Sciences*, 433 (December), 137-166.
- Holbrook, Morris B. (1980), "Some Preliminary Notes on Research in Consumer Esthetics," in *Advances in Consumer Research*, Vol. 7, ed. Jerry C. Olson, Provo, UT: Association for Consumer Research, 104-108.
- and John O'Shaughnessy (1988), "On the Scientific Status of Consumer Research and the Need for an Interpretive Approach to Studying Consumption Behavior," *Journal of Consumer Research*, 15 (December), 389-402.
- Hopkins, Claude C. (1927), *My Life in Advertising*, New York: Harper.
- Houston, Michael J., Terry L. Childers, and Susan E. Heckler (1987), "Picture-Word Consistency and the Elaborative Processing of Advertisements," *Journal of Marketing Research*, 24 (November), 359-369.
- Hunt, Shelby D. (1991), "Positivism and Paradigm Dominance in Consumer Research: Toward Critical Pluralism and Rapprochement," *Journal of Consumer Research*, 18 (June), 32-44.
- Kahn, Barbara E. and Rakesh K. Sarin (1988), "Modeling Ambiguity in Decisions under Uncertainty," *Journal of Consumer Research*, 15 (September), 265-272.
- Kardes, Frank R. (1988), "Spontaneous Inference Processes in Advertising: The Effects of Conclusion Omission and Involvement on Persuasion," *Journal of Consumer Research*, 15 (September), 225-233.
- Kirshner, Harold (1970), "Wordplay in English Advertising," in *Studies in Honor of J. Alexander Kerns*, ed. R. C. Ligon and M. G. Saltzer, The Hague: Mouton, 75-78.
- Levitt, Theodore (1970), "The Morality(?) of Advertising," *Harvard Business Review*, 48 (July-August), 84-92.

- Levy, Sidney (1959), "Symbols for Sale," *Harvard Business Review*, 59 (July-August), 117-124.
- Lutz, Kathy A. and Richard J. Lutz (1977), "Effects of Interactive Imagery on Learning: Application to Advertising," *Journal of Applied Psychology*, 62 (August), 493-498.
- Lutz, Richard J. (1989), "Positivism, Naturalism, and Pluralism in Consumer Research: Paradigms in Paradise," in *Advances in Consumer Research*, Vol. 16, ed. Thomas K. Srull, Provo, UT: Association for Consumer Research, 1-7.
- MacDonald, A. P. (1970), "Revised Scale for Ambiguity Tolerance: Reliability and Validity," *Psychological Reports*, 25, 791-798.
- MacInnis, Deborah J. and Bernard J. Jaworski (1989), "Information Processing from Advertisements: Toward an Integrative Framework," *Journal of Marketing*, 53 (October), 1-23.
- , Christine Moorman, and Bernard J. Jaworski (1991), "Enhancing and Measuring Consumers' Motivation, Opportunity and Ability to Process Brand Information from Ads," *Journal of Marketing*, 55 (October), 32-53.
- McCracken, Grant (1986), "Culture and Consumption: A Theoretical Account of the Structure and Movement of the Cultural Meaning of Consumer Goods," *Journal of Consumer Research*, 13 (June), 71-84.
- McGill, Ann and Punam Anand (1989), "The Effect of Vivid Attributes on the Evaluation of Alternatives: The Role of Differential Attention and Cognitive Elaboration," *Journal of Consumer Research*, 16 (September), 188-196.
- McQuarrie, Edward F. (1989), "Advertising Resonance: A Semiological Perspective," in *Interpretive Consumer Research*, ed. Elizabeth C. Hirschman, Provo, UT: Association for Consumer Research, 97-114.
- (1992), "Resonance: Criteria for Effective Use," in *Marketing Signs*, ed. Jean Umiker-Sebeok, Bloomington: Indiana University Press.
- Mick, David Glen (1986), "Consumer Research and Semiotics: Exploring the Morphology of Signs, Symbols and Significance," *Journal of Consumer Research*, 13 (September), 196-214.
- , Paula Horvath-Neimeyer, and Edward F. McQuarrie (1992), "Convergent Validity in Semiotic Advertising Analyses," in *Marketing Signs*, ed. Jean Umiker-Sebeok, Bloomington: Indiana University Press.
- and Laura G. Politi (1989), "Consumers' Interpretations of Advertising Imagery: A Visit to the Hell of Connotation," in *Interpretive Consumer Research*, ed. Elizabeth C. Hirschman, Provo, UT: Association for Consumer Research, 85-96.
- Miniard, Paul W., Sunil Bhatla, Kenneth R. Lord, Peter R. Dickson, and H. Rao Unnava (1991), "Picture-based Persuasion Processes and the Moderating Role of Involvement," *Journal of Consumer Research*, 18 (June), 92-107.
- Mueller, Rachel and Raymond Gibbs (1987), "Processing Idioms with Multiple Meanings," *Journal of Psycholinguistic Research*, 16 (1), 63-81.
- Norton, Robert W. (1975), "Measurement of Ambiguity Tolerance," *Journal of Personality Assessment*, 39 (6), 607-619.
- Nunnally, Jum (1978), *Psychometric Theory*, New York: McGraw-Hill.
- O'Guinn, Thomas C. and Ronald J. Faber (1989), "Compulsive Buying: A Phenomenological Exploration," *Journal of Consumer Research*, 16 (September), 147-157.
- Perdue, Barbara C. and John O. Summers (1986), "Checking the Success of Manipulations in Marketing Experiments," *Journal of Marketing Research*, 23 (November), 317-326.
- Perfetti, Charles A., Sylvia Beverly, Laura Bell, Kimberly Rodgers, and Robert Faux (1987), "Comprehending Newspaper Headlines," *Journal of Memory and Language*, 26, 692-713.
- Petty, Richard E., John T. Cacioppo, and David Schumann (1983), "Central and Peripheral Routes to Advertising Effectiveness: The Moderating Role of Involvement," *Journal of Consumer Research*, 10 (September), 135-146.
- Pollay, Richard W. and Steve Mainprize (1984), "Headlining of Visuals in Print Advertising," paper presented at the American Academy of Advertising, Denver.
- Quirk, Randolph (1951), "Puns to Sell," *Studia Neophilologica*, 23 (2-3), 81-86.
- Raynor, Keith and Susan Duffy (1986), "Lexical Complexity and Fixation Times in Reading: Effects of Word Frequency, Verb Complexity, and Lexical Ambiguity," *Memory and Cognition*, 14, 191-201.
- Redfern, Walter (1982), "Guano of the Mind: Puns in Advertising," *Language and Communication*, 2 (3), 269-276.
- (1985), *Puns*, New York: Blackwell.
- Rossiter, John and Larry Percy (1987), *Advertising and Promotion Management*, New York: McGraw-Hill.
- Scott, Linda M. (1990), "Understanding Jingles and Neddledrop: A Rhetorical Approach to Music in Advertising," *Journal of Consumer Research*, 17 (September), 223-236.
- Sheldon, Esther K. (1956), "Some Pun among the Hucksters," *American Speech*, 31, 13-20.
- Stern, Barbara (1989), "Literary Criticism and Consumer Research: Overview and Illustrative Analysis," *Journal of Consumer Research*, 16 (December), 322-334.
- Sternthal, Brian and C. Samuel Craig (1973), "Humor in Advertising," *Journal of Marketing*, 37 (October), 12-18.
- Thompson, Craig J., William B. Locander, and Howard R. Pollio (1989), "Putting Consumer Experience Back into Consumer Research: The Philosophy and Method of Existential-Phenomenology," *Journal of Consumer Research*, 16 (September), 133-146.
- Unnava, H. Rao and Robert E. Burnkrant (1991), "An Imagery Processing View of the Role of Pictures in Print Advertising," *Journal of Marketing Research*, 28 (May), 226-231.
- Wallendorf, Melanie and Eric J. Arnould (1991), "'We Gather Together': The Consumption Rituals of Thanksgiving Day," *Journal of Consumer Research*, 18 (June), 13-31.
- Ward, James and William Gaidis (1990), "Metaphor in Promotional Communication: A Review of Research on Metaphor Comprehension and Quality," in *Advances in Consumer Research*, Vol. 17, ed. Marvin E. Goldberg et al., Provo, UT: Association for Consumer Research, 636-642.
- Wells, William D. (1988), "Lectures and Dramas," in *Cognitive and Affective Responses to Advertising*, ed. Pat Cafarella and Alice Tybout, Lexington, MA: Heath.
- Williamson, Judith (1978), *Decoding Advertisements: Ideology and Meaning in Advertising*, Boston: Boyars.