Pursuing the meaning of meaning in the commercial world: An international review of marketing and consumer research founded on semiotics*

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Meaning in the commercial world is essential and enigmatic. From product design and packaging to advertising and retailing, marketers are continually seeking to strategically facilitate meanings that contribute positively to brand images, purchase likelihood, satisfaction, and the like. For their part, consumers are continually acquiring, using, sharing experiences, and disposing in substantial accordance with the meanings they attribute to products, ads, purchase sites, and so forth. However, despite its indisputable role in marketing and consumption activities, meaning has long been — and remains — one of the most complex phenomena to theorize and investigate (Nöth 1990: 92–102; Ogden and Richards 1923; Schirato 1998).

Nearly a half century ago, pioneering North American scholars began to expose the essentialness of meaning in marketing and consumer behavior (e.g. Levy 1959). However, during the 1960s and 1970s, most North American researchers focused on information processing rather than meaning, as economic and socio-cognitive psychological perspectives dominated the marketing and consumer behavior fields. Elsewhere, in Europe particularly, research on meaning in marketing and consumer behavior was less de-prioritized and carried out by scholars who had been heavily influenced by semiotics, including Barthes (1967 [1964]), Durand (1970), Langholz-Leymore (1975), Péninou (1972), Porcher (1976), and Williamson (1978).[1]

Over the last two decades, marketing and consumer researchers have taken up a more intense interest in meaning (Belk 2002). To varying degrees, numerous of their works have been based on semiotics, including (a) journal articles (e.g. Arnold, Kozinets, and Handelman 2001; Bishop 2001; Brannen 2004; Grayson and Shulman 2000; Hirschman 1988; Holbrook and Grayson 1986; Levitt 1997; Levy 1981; McQuarrie and Mick 1999; Pinson 1988; Sherry and Camargo 1987; Thompson and Haytko 1997; Zakia 1986); (b) conference proceedings (e.g. Larsen, Mick, and Alsted 1991; Nöth 1997; Umiker-Sebeok 1987); and (c) books and book

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chapters (e.g. Aoki 1994; Boutaud 1998; Buchelhofer 1992; Csikszentmihalyi and Rochberg-Halton 1981; Desmond 2003, chapter 5; Fiske 1989; Fukuda 1990; Gottdiener 1995; Holbrook and Hirschman 1993; Jensen 1995; Leiss, Kline, and Jhally 1986; Poddig 1995; Schroeder 2002; J. Solomon 1988; Vihma 1995).

Given the complexity of meaning and the surge of related marketing and consumer research, it is hardly surprising that extant scholarship is eclectic and fragmented. And as crucial as semiotics seems to have been to this meaning movement, there remains uncertainty about its contributions. Many works remain largely unknown due to their far-spread and multi-language bases. Prior reviews are also outdated (e.g. Mick 1986), constrained in length to brief overview (e.g. Pinson 1993), focused on single countries of scholarship origin (e.g. Hetzel and Marion 1995a, 1995b), or centered on only one substantive topic (e.g. advertising: Bachand 1988; Bode 1996; fashion: Kaiser 1990a). Thus, our goals were to gather and synthesize from worldwide sources the latest marketing and consumer research based on semiotics, to assess the value of semiotics for answering important intellectual questions, and to offer guidance on future semiotic research in marketing and consumer behavior.

We begin by outlining our review methods. We then describe an expanded variation of McCracken's (1986) model of meaning movement as a holistic framework for organizing and analyzing the accumulated materials. Next we summarize the alternative paradigms and historical trajectories of semiotics in marketing and consumer research, leading to the research criteria we used to evaluate the varying studies and to select those spotlighted in this article. We then review and critique research relevant to each stage of our framework. We close by drawing broad conclusions about the progress, trends, and future of semiotic research in marketing and consumer behavior.

Collection of international research

We assembled as a team with shared interests in semiotics, marketing, and consumer behavior. We had language fluencies in English, French, Italian, German, Spanish, and Japanese, and also recruited a group of multilingual assistants (graduate students and a professor of linguistics) for various supportive roles (e.g. library work, text coding). We sent out over 400 letters and emails worldwide to solicit published and unpublished works from academicians and marketing executives. We also requested work through announcements in newsletters and on electronic list servers, as well as correspondence with scholarly societies (e.g. Association for

Consumer Research; Japanese Association for Semiotic Studies; International Semiotic Institute of Imatra, Finland). Library work included a thorough review of academic journals and a comprehensive search of electronic databases in the social sciences, humanities, and business. These combined efforts located more than 600 works of potential relevance.

We then pruned the sample to make it as current and applicable for our goals as possible. First, we focused mainly on works produced or published during the mid-1980s and afterward. Second, we reduced the sample to works that made explicit application of semiotics. To do this we set three criteria: a work had to be openly based on major semiotic thinkers (e.g. Peirce, Saussure, Barthes, Eco), use fundamental semiotic concepts (e.g. codes, symbols/icons/indices), or employ semiotic analytic techniques (e.g. Greimas' semiotic square). Research that was not explicitly built on semiotics was excluded, since there was no clear way of evaluating the contribution of semiotics to that research, which is the premier objective of this review.[2] Third, we focused especially on empirical research, with the reasoning that the availability of stimuli, texts, or data (e.g. packages, ads, interviews, introspections, quantitative ratings) could facilitate more clear-cut conclusions about applications of semiotics. However, strong conceptual works were included as well. Even with these qualifying abridgements, over 350 journal articles, conference papers, unpublished manuscripts, books, and book chapters remained in the core sample of materials.

A framework for assessing semiotic marketing and consumer research

As groundwork to organize and assess the collected materials, we drew from a well-regarded three-stage model on the structure and transfer of cultural meaning in consumer goods. According to McCracken (1986), marketing gatekeepers such as advertisers and fashion designers begin by selecting key meanings residing in cultural categories (e.g. gender) and cultural principles (e.g. manliness). Second, they transfer the meanings to consumer goods through advertisements, clothing designs, and so forth. In the third stage, consumers appropriate these meanings into their lives through various rituals such as grooming and gift exchange. An advantage of McCracken's model is the sequence of stages it offers for positioning semiotic research in its appropriate marketplace focus and within the overall trajectory of meaning. A second advantage is its emphasis on the large and inevitable role of culture in marketing and meaning phenomena. A third advantage is that the model draws attention to the important roles of structure and process (the latter McCracken calls transfer), which

are two aspects of meaning that are also prominent across semiotic research.

However, for our purposes there are also limitations to McCracken's model. First, it focuses heavily on advertising and fashion, and excludes other venues of meaning (e.g. packaging, retailing, entertainment, non-ritualistic consumption). Second, by stressing cultural elements, the model deals mainly with symbolic meaning and de-prioritizes other forms (e.g. iconographic). Therefore, in Figure 1, we have adapted and expanded McCracken's model. We take advantage of the sequential stages and the concentration on structure and process. We extend the model by integrating the marketing planning and design phases with the subsequent consumer stages of acquisition and consumption. In Figure 1, the notion of *potentializing* meanings relates to marketers' known or apparent efforts to set up imminent meanings and to guide targeted or ideal consumers toward them (in Eco's 1979 semiotics, these consumers would be known as 'model' readers). The notion of *actualizing* meanings relates to the concrete efforts of everyday consumers to activate or generate meanings, regardless of whether these meanings are what the marketer potentialized. Thus, compared to McCracken's model, our framework is both broader

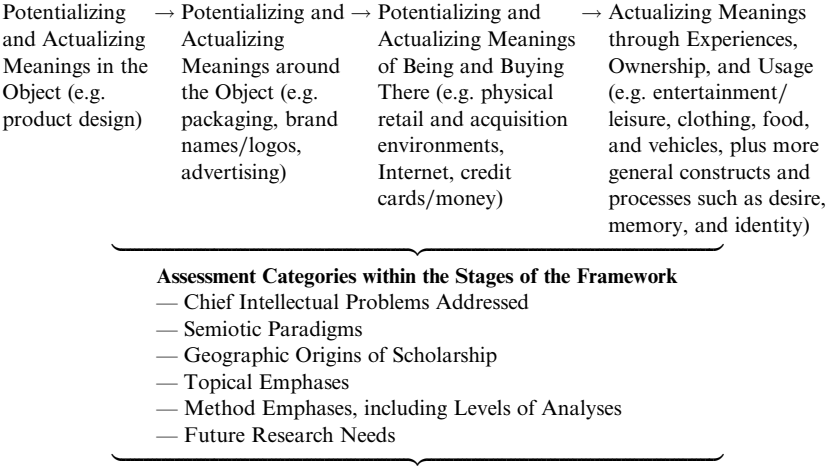

Figure 1. *Framework for assessing semiotic marketing and consumer research*

(more stages, more topics) and narrower (centered on the role of semiotics). Our framework also reflects a blend of the transmission model and the construction model of communication and meaning that have each been highly influential in semiotics (see Hetzel and Marion 1995a).

Immediately beneath the stages in Figure 1 are the main categories we use to describe and appraise the collected research, with an ardent focus on persistent intellectual problems *within* a topical domain of marketing and consumer behavior, most particularly in relation to meaning. At each stage, we also tailor the review according to semiotic paradigms, geographic origins, levels of analyses, and so on, depending on which foci seemed advantageous for highlighting the most noteworthy uses, merits, or limitations of semiotics. As the bottom third of Figure 1 indicates, we conclude our review with a look *across* the framework's stages for drawing overarching insights on the advantages, trends, controversies, and frontiers of semiotic research in marketing and consumer behavior. All considered, Figure 1 is intended to serve as a holistic framework for codifying, integrating, and evaluating semiotic research on the nature and role of meaning in marketplace activities and consumerhood.

Summary of semiotic paradigms, early applications, and evaluative criteria within marketing and consumer research

Prior to beginning our review, it is beneficial to summarize and reflect upon the important paradigms, historical trends, and evaluative criteria that underlie the collected materials and this project. Semiotics as a whole, and in its applications within marketing and consumer research (Nöth 1990; Pinson 1988, 1993), have had two dominant paradigms. One is Saussure's (1986 [1916]), including its elaboration by Hjelmslev (1961 [1943]). Grounded in linguistics but positioned by Saussure as elemental to social psychology, this paradigm incorporates a two-component model of signification made up of the signifier (sign) and the signified (that which is signaled or referred to, particularly mental concepts). This paradigm has heavily influenced Continental European semiotics, most especially in France. Its basis in language has led to an intense focus and extensive insights on (a) the nature and role of structure in communication and meaning, (b) the nature and role of symbolism (i.e. the arbitrary connection of signifier to signified or expression to content), and (c) the cultural relativity of communication and meaning due to arbitrariness. Those who have substantially developed, challenged, and modified this basic paradigm in recent decades have included Barthes, Baudrillard, Derrida, Griemas, and Lacan. Those who first applied the paradigm to

marketing and consumer phenomena were mostly French researchers, including Barthes (1967 [1964]), Durand (1970), and Péninou (1972). From them, the Saussurean paradigm spread across Europe to influence many other scholars of meaning in marketing and consumer behavior (see e.g. articles by Bertrand, Floch, Langholz-Leymore, Nöth, and Solomon in Pinson 1988). In the 1980s, this paradigm also crossed the Atlantic to begin influencing marketing scholars in North America, and simultaneously traversed eastward into Asia (see e.g. research by Holman and by Kehret-Ward, as reviewed in Mick 1986, and articles by Hirschman, Hoshino, Holbrook, and Passikoff and Holman in Umiker-Sebeok 1987).

The second dominant semiotic paradigm is Peirce's Anglo-Saxon framework (Peirce 1931–1958), based strongly in philosophy and, to some extent, the physical sciences (due to Peirce's employment at the U.S. Coast Survey and his related scientific publications). It incorporates a three-part model of signification, the representamen (sign), the object (to which the sign refers), and the interpretant (the response or interpretation of the observer/communicator). The strengths of Peirce's paradigm include a sophisticated set of distinctions, labels, and stages among the three components of his model (and interrelations among the components) and a metaphysics that recognizes a role for cultural relativity but does not preclude an objective independent reality. Scholars such as Jakobson, Morris, and Sebeok, among others, helped to bring Peirce's scholarship on semiotics into international recognition, appreciation, and elaboration. In marketing and consumer research, some of the earliest influences of Peirce in North America were evinced in research by Holbrook and by Kehret-Ward (as discussed by Mick 1986), Verba and Camden (1987), and Mick (1988a). At about the same time, there were also influences in Japan (e.g. Kawama 1985) and in Europe (e.g. Kloepfer 1987).

As our review will show, the use of Saussure's and Peirce's paradigms has burgeoned internationally among marketing and consumer scholars. However, due to their differing epistemological and ontological heritages, these two dominant paradigms and their applications in marketing and consumer research are noticeably varied. Some scholars believe that the differences are not only inevitable, but actually render the two paradigms incommensurable. Other scholars are more optimistic about using, and even interweaving, both paradigms in related research (we discuss this issue more in our closing discussion section). The Saussurian paradigm, with its linguistics foundation, has been most used in structural, text-interpretive analyses of meaning. As with many such studies, the main concern is with identifying potentialized or imminent meanings from the close reading of qualitative material (e.g. packages, ads). Direct data from marketers or consumers have not usually been considered necessary

or even useful to profile potentialized meanings, except occasionally the researcher's personal introspections, observations, and insights. This proclivity is changing, however, as our review brings to light. In any case, a preeminent criterion for judging most applications of the Saussurian paradigm is the richness and resonance of the interpretive analyses in producing in-depth understandings of the textual materials.

By comparison, with its ties to philosophy and the physical sciences, the Peircean paradigm has been used heavily in conceptual treatises as well as projects involving qualitative or quantitative data. When strictly applied to qualitative data (e.g. an ad), it shares the same evaluation criterion mentioned above that has governed most applications of Saussurian semiotics. When quantitative data are employed, as in a survey or experiment, then evaluation criteria include the internal validity or procedural rigor of the study itself (e.g. sampling, measures or manipulations) and the resulting insights from the mathematical or statistical analyses (e.g. whether hypothesis tests or quantitative solutions are supported by the data patterns). This latter set of criteria also applies to the Saussurian paradigm in projects involving quantitative data.

There are evaluative criteria that apply simultaneously to both paradigms, regardless of whether any data are used (qualitative or quantitative). One criterion is the importance of the topic or issue being studied. Another is expositional and graphic clarity in the presentation of the research and its putative insights. But the most important shared criterion is the extent to which prior knowledge about the selected topic or issue is advanced. This may include a modification of previous understandings, a challenge to prior insights, or new learning all together. Therefore, it is critical for researchers to accurately outline relevant prior knowledge, and then demonstrate convincingly that their work contributed something novel.

Most of the works we draw attention to in this article are among the better semiotic works on marketing and consumer behavior, judged according to criteria listed above. Nonetheless, some invariably fall short, as we occasionally point out, and these gaps or deficiencies help to identify how future research can be improved for greater advancements of knowledge about meaning in the commercial world.

Potentializing and actualizing meanings in the object: Conceptualization and design of products

Since the words 'design' and 'sign' share etymological roots (Ashwin 1989), this section is a logical starting point for our framework and

review. Specifically, marketers must be able to conceptualize and talk about a new product's various features and qualities during its development and prototyping, including the anticipation of meanings for targeted consumers. But, as Hustad (1991) notes, the history of product design reveals a dominant focus on performance functionality and projected success from manufacturing and financial perspectives. Product design continues to be equated with problem solving, which 'drains the word *design* of most, if not all, meaning' (Bailetti and Litva 1995: 4). When consumer meaning is considered, it is treated strictly as an individualistic, cognitive event (e.g. Friedman and Lessig 1987). The main intellectual challenges in this area that semiotics has served so far to address are (a) developing languages and taxonomies that help to identify and differentiate the signs and meanings of design and (b) explicating sign functions and consumer meaning processes, including social, motivational, and affective factors.

Lexicons and taxonomies

Based on Peirce's paradigm, the Japanese academic Tetsuo Kawama (1987, 1990) has developed one of the more sophisticated vocabularies for visual signs in product design. [See the German researcher Buchelhofer (1992) for a complementary framework based on Morris' (1938) semiotics.] Peirce characterized semantics as the relation of sign to object, with the latter capable of being any physical or non-physical entity. Semantics encompasses three primary categories of meaning in terms of (1) similarity between sign and object (iconic relations), (2) causality between sign and object (indexical relations), and (3) arbitrary cultural rules connecting sign and object (symbolic relations). Kawama (1990) classified product designs and their meanings by merging Peirce's semantic categories in an original manner. Figure 2 distills two of Kawama's (1990) graphic frameworks, including some of the product exemplars he provides. He emphasizes the iconic nature of many product designs, indicating that consumers must assign meanings to new products based on what the new designs remind them of. An example of a pure icon in design is a camera shaped like Mickey Mouse, which suggests playfulness and appropriateness for a younger consumer. But iconic relations can sometimes be relatively absent, or blend with those that are causal or symbolic. For example, an *incon* design, as Kawama names it, has an organic form that merges similarity with casual relations, as when keyboards incorporate hand and finger shapes. A *syndex* design in the case of chopsticks, for instance, has an abstract form that merges the culturally arbitrary (e.g. Japanese tendencies for simplicity) with the rational, causal relation of pinching or scoop-

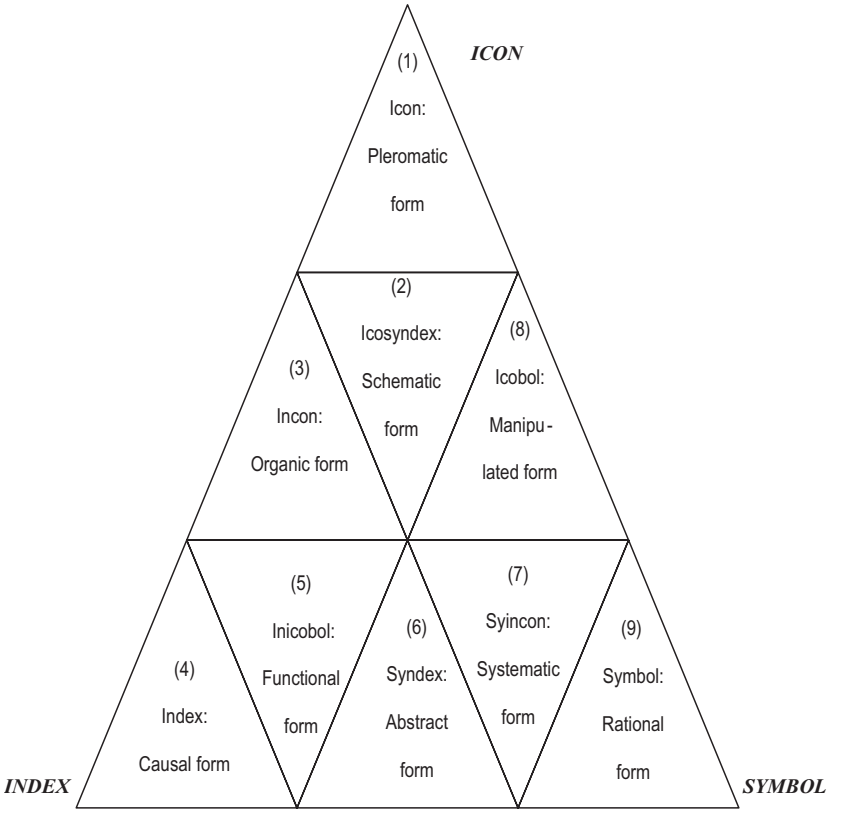

Figure 2. *Kawama's (1990) Peircean framework, characteristics of forms, and product exemplars*

Product exemplars

1. Icon: e.g. the traditional Japanese helmet with concrete representations of dragons, and ketchup containers shaped like a tomato, hammers like a house, rulers like an alligator, and cameras like Mickey Mouse

2. Icosyndex: e.g. a stereo receiver designed with piano and guitar relief decorations, indicating that the product has something to do with producing music

3. Incon: e.g. some aircraft designs use adaptations of bird wings, and there also designs for keyboards and scissors that use finger-like shapes

4. Index: e.g. a bolt and wrench show their mutual cause and effect relationship in their shapes

5. Inicobol: e.g. shavers (e.g. by Braun) and many other manufactured products have a straightforward functional design

6. Syndex: e.g. the uncluttered rational forms of traditional Japanese household goods such as chopsticks and furoshiki wrapping cloths that indicate simplicity in the extreme

7. Syincon: e.g. system furniture and stacking chairs have a compact orderly form

8. Icobol: e.g. some furniture is designed (e.g. by Memphis) to have geometrical shapes with a touch of intelligent play

9. Symbol: e.g. clocks are designed according to the rational but arbitrary rules of the time system

Figure reprinted by permission from Mouton de Gruyter; for more details, see Kawama (1990).

ing food during a meal. The contribution of Kawama's approach is the more refined terminological and conceptual tools it offers to talk about and differentiate aspects of designs and their possible meanings. However, while his insights are definitely intriguing, the condensed and Japan-specific nature of his examples impede a more comprehensive appreciation of his efforts. Application and illustration to a fuller range of products across national settings would help to clarify Kawama's framework and set up more extensive testing and validation.

The Finnish design scholar Susann Vihma (1992) has also drawn from Peirce's paradigm, but unlike Kawama, she focuses more strictly on iconic relations and develops her own scheme of six categories. One, for example, is similarity based on tradition (e.g. nearly all scissors have a scissor-like form). Another is when similarity of forms suggests that products belong together in a special environment (e.g. kitchen appliances, office furniture). Thus, designs can have different types of resemblances (iconicities), each purported by Vihma to help the consumer generate and learn meanings about a new product. Whether some iconicities are better than others for achieving certain influences, such as memory or preferences — perhaps moderated by product-type or the level of consumers' prior knowledge — remains to be shown.

Alternative to Kawama and Vihma, the Japanese scholar Hoshino (1987) adopted Saussure's paradigm and focused on symbolism. He bifurcated meaning in product design according to a structure of denotation and connotation, as Hjelmslev and Barthes did years earlier, and then further subdivided the connotative meanings into surface and deep meanings. In one illustration, Hoshino analyzes the Tall Boy car (developed by Honda in the early 1980s) as a small and unusual design, with a powerful energy-saving engine that denoted high performance and efficiency, but also connoted something humorous (surface) and friend-like or toy-like (deep). This hierarchical analysis of design meaning is promising, but it is yet to be demonstrated whether other researchers would similarly differentiate denotations and connotations, let alone surface and deep connotations, and whether these differences influence consumer responses (e.g. attitudes) in varied ways.

Functions and processes

Vihma (1995) has also drawn on Peircean principles to examine the functions of signs and related meanings potentiated in common product designs (e.g. steam iron, exercise bicycle). Iconic qualities, she notes, can include color (e.g. whiteness indicates cleanliness or lightweight), materi-

als (e.g. a glassy look may indicate fragility), and analogy (e.g. a sleek, forward-leaning iron can appear like a fast vehicle). Indexical aspects such as lights and sounds signal when operations have reached a certain state or completed a specific function (e.g. red = stopped). Symbolic qualities include logos and other graphics that distinguish one brand or model from another (we treat branding in the next section as a promotional issue). As Vihma effectively shows, it is theoretically and normatively useful to conceive of product designs as a collection of signs that function in different ways, and that most designs have a combination of icons, indices, and symbols that serve product operations and meanings. What remains to be shown is why, when, and how some of these semantic qualities in the Peircean paradigm might dominate or diminish in some contexts (versus others) for some consumers (versus others).

From another linguistics paradigm, a leading French researcher on product design, Odile Solomon (1988), has drawn from Jakobson's (1960) semiotics and argued that automobile designs have two main communicative functions, phatic and poetic. The former relates to the physical and psychological contact between the automobile and the consumer, particularly the legibility, recognition, and memorability of the car's form, while the latter relates to the pleasure induced by the car's form. For instance, she blends the characteristics of the phatic function with the Gestalt principles of balance, consistency, simplicity, grouping, and subdivision. She then proposes in a fascinating discussion how the differentiating shapes of cars such as the Austin Martin (cubic), Volkswagen Beetle (ovoid), and Citroen CX (concave trapezoid) affect memorability for the brands. Her subsequent work extends these insights by revealing the tendencies and tensions of meaning in automotive designs across cultures through an examination of multinational automotive publications and interviews with designers in Japan, America, France, Italy, and Germany (O. Solomon 1992). For parallel applications of Jakobson's semiotics to product design, see the Swedish researcher Monō (1992) and the British researcher Ashwin (1989). In each of these interesting works, however, the absence of direct consumer data leaves open a host of questions about their implications at the everyday market level.

Also based in structural semiotics, but moving away from purely text analysis, the German psychologist Espe (1992) connected product design to consumers' lifeworlds and tested the distinctiveness of Guiraud's (1975) three semiotic codes in the context of consumers' actualized meanings. A code (like a grammar) incorporates rules for combining signs into messages and for attaching signs to meaningful concepts. According to Guiraud, there are (1) logical codes that signify objective experience and the relations of humans to the world; (2) aesthetic codes that signify

subjective expressions from the human spirit; and (3) social codes that signify the individual's place within a group and the group's place within a sociocultural community. Espe had 39 consumers sort 50 pictures of watches and then he interviewed them about their sort piles. A multidimensional scaling analysis revealed three dominant dimensions underlying respondents' perceptions that were appreciably correspondent to Guiraud's three codes. One dimension of numerals versus no numerals appeared to be a logical code concerning the degree to which the watch reflects a rational, technological approach to the world (digital watches with calculators being a leading example). A second dimension of jewelry versus plain indicated an aesthetic code related to the degree of ornamental beauty. Finally, a third dimension of gold versus plastic suggested a social code related to status and occasion. Another German scholar, Krampen (1995), performed a similar semiotic-informed cluster analysis of the designs of multiple household projects (e.g. lamps, clocks, telephones) that produced a complementary solution of three dimensions: technical versus non-technical, decorated versus plain, and functional versus luxury. Espe's and Krampen's studies rigorously demonstrate that insights emanating from Saussure's paradigm can be convincingly applied to product design and assessed with quantitative consumer data.

Taking a similar tact, but focused instead on product perceptions derived from design-identity congruencies, the French scholar Damak (1996) studied adults' responses to perfume bottles. She first assessed consumers' perceptions of their real, perceived, and dreamed (ideal) body shapes, and categorized bottle shapes into linear and curved forms. She then sought to understand what she called the semiotic tension between preferring a bottle design that is congruent or opposite to one's body identity. Her most basic result showed that women gave more attention than men to their bodies overall. But, more importantly, she found that women who were comparatively more satisfied with their bodies (i.e. fewer differences between real, perceived, and ideal) preferred bottle shapes that were physically similar to their own, whereas women who were less satisfied with their bodies (poor match of real or perceived to ideal) preferred bottle shapes much closer to their dreamed body.

Summary and further directions

This first section of our review reveals that semiotic design scholarship has flourished in countries and cultural regions where issues of style, form, fashion, and elegance have been historically central — most notably in France, Italy, Scandinavia, and Japan. The review also reveals

that semiotics has unmistakably helped to address and partly resolve certain intellectual problems of meaning in product design. One specific contribution has been the development of new, sophisticated terms for conceptualizing the types and nature of signs that constitute a product and its potentiated meanings. To do this, some researchers have adopted and extended the Peircean distinctions of icon-index-symbol. Others have contributed to understanding the goals and processes of meaning generation in product design, based on Jakobson's renowned semiotic paradigm on the different roles of communication. The consumer influences of sign variations in product design (from Peirce or Saussure) have also been theorized in terms of recognition, comprehension, learning, memory, and appreciation (aesthetic reactions) at the product-type level and, occasionally, at the brand level.

As we have already alluded to, the primary shortcomings of current semiotic design research are (1) the occasionally cryptic descriptions and applications of new conceptual terms for describing the nature of signs and (2) a tendency to stop at the lexicographic or taxonomic stages of knowledge development. One surprising revelation is that more works based on the Saussurean paradigm appear to have been tested with quantitative consumer data (e.g. Espe 1992; Damak 1996; Krampen 1995) than works based on the Peircean paradigm (e.g. Kawama 1987, 1990; Vihma 1992, 1995). We do not mean to suggest that assessments with quantitative consumer data are always necessary or superior, but when consumer data can be used to verify a priori semiotic claims about meaning in marketing or consumer behavior, then the credibility of those claims is fortified.

There remain many gaps of knowledge about product design beyond functionality, including meaning and its consumer implications. Additional research is needed to evaluate distinctions in complex design taxonomies such as Kawama's (1990). Use of methods such as perceptual mapping, conjoint analysis, and experiments could also lead to new insights, where variations in sign type or function can be manipulated (or precoded) and their effects gauged for preferences and affective reactions (for an excellent guide, see Veryzer and Hutchinson 1998). With today's computerized graphic design programs, hypotheses from rich structural analyses such as Odile Solomon's (1988) also lend themselves to straightforward testing via experimental manipulations.

In terms of contemporary designs, many new products have 'retro' features (e.g. stereos and cars that have incorporated looks and materials from similar products in the 1940s and 1950s), and there are many interesting questions for qualitative analyses about the historical continuities and changes of imminent meanings that these retro designs set up for

consumers in the twenty-first century. In addition, product designers are often deliberate in their choices of particular materials (e.g. wood, plastic, glass, metal, paper). Yet, aside from some initial work by researchers such as Espe (1992) and Vihma (1992, 1995), little is known about the way these design choices can influence consumer meanings, including such issues as status (e.g. social comparison), ecology (e.g. morals, fears), and times gone by (e.g. reminiscence), among other things. Finally, at a molar level of analysis, further semiotic research is needed that probes the growing social responsibilities of designers, particularly in their role for reconstituting sign-concept relations and consumer's identities as new designs are adopted (see the Italian researcher Vitta 1989).

Potentializing and actualizing meanings around the object

Branding comes to the fore after product design, incorporated as the second stage of Figure 1. Semiotic researchers have conceptualized branding as a multifaceted contract between the manufacturer and the consumer (Bertrand 1999; Heilbrunn 1998a; Lipovetsky and Roux 2003; Semprini 1996), focusing especially on communication and meaning in packaging, names/logos/trademarks, and advertising.

Packaging

Market researchers have mostly viewed packaging as a container to protect a product. This is the same bias mentioned earlier in regard to product design, i.e. a primary focus on functionality (for an early and pioneering exception, see Dichter 1975). Semiotic-based researchers who have turned attention to packaging see its roles as multiform and more complicated in terms of meaning. The two intellectual problems they have mainly addressed are (a) exploring the apparent network of commercial and consumer goals associated with packaging, and how these interact to make meaning immanent and (b) mapping the sign structure of packaging's communicative content for potentiating meaning.

The French scholar Dano (1996) has drawn on the full range of Jakobson's (1960) six semiotic functions of communication (expressive, conative, metalinguistic, phatic, referential, and poetic) and, in hypothesizing the meaning-producing goals of packaging, she insightfully connects each of these differentially to the marketer and the consumer. For example, in the conative function of packaging, the marketer seeks to construct an image of the intended consumers and to shape their motivational and be-

havioral responses to the product. The consumers, in their conative function, seek to be valued by other consumers through their appropriation of the constructed image. In the metalinguistic function, the marketer sometimes seeks to create an innovative communication code via packaging that certain consumer markets may especially appreciate.

Similar semantic functions are illustrated in Sherry and Camargo's (1987) work on beverage containers in Japan. They describe four types of Japanese orthography in product labeling. They then focus on the *romaji* style of roman letters as a system of blended Japanese and English, sounds and spellings, which constitutes an intricate structure of code mixing. For marketers, this strategy implements the metalinguistic function, while also engaging the conative function via symbolic brand meanings. For Japanese consumers, this strategy invites them to participate in the changes and stabilities of their cultural identity, including celebration of their emergent global society, which has been heretofore conservative and sealed off from many outside influences.

Klapisch (1995), another French scholar based in the Saussurean and Jakobsonian paradigms, has also addressed the semiotics of packaging by arguing that understanding meaning depends on appreciating different sign goals. Her illustrative substantive focus is on packages of feminine products (napkins and tampons). But rather than borrowing prior taxonomies of communication goals, she proposes three functions: utilitarian (e.g. vacuum-sealed and waterproof), anthropological (e.g. promotional signs that suggest healthiness or sexiness from product use), and marketing (e.g. promotional signs indicating how the brand varies from other brands). Based on these functions, Klapisch demonstrates in a revealing diachronic analysis how napkin and tampon packaging have systematically changed or maintained certain meanings about women's bodies, taboos of menstruation, sociocultural values, and the products themselves. For example, signs of white or pale colors and serious language tone have decreased in napkin packaging, suggesting that there is a move away from clinical and pharmaceutical codes and the representation of menstruation as a loss of blood to be treated by medical specialists. New signs and codes, including brighter colors and pleasant symbols, now portray menstruation as an ordinary occurrence fully manageable by women themselves. In contrast, the taboos of menstruation are dealt with in tampon packaging through continued scientific signs, where product usage is explained through explicit language, figures, and drawings.

The American anthropologist Rose (1995) has provided a related but more detailed introspection on the linguistic and non-linguistic signs from a shampoo package. In a broad-brush manner, he adopts a Peircean perspective that stresses how the consumer has a prior mindset that

substantially influences experiences with the package, with its ostensibly straightforward signs and meanings that are actually quite ambiguous. For example, the front of the white plastic bottle includes the brand name (Head and Shoulders) and descriptive phrases such as 'normal to dry' and 'concentrate shampoo'; on the back, there is the directive to 'Lather-Rinse-Repeat' and the technical disclosure 'Contains Pyrithione Zinc'. As Rose notes, however, shampoo is obviously not intended for human shoulders, and this fact makes the very brand name inherently vague. It may be a rhetorical pun on the boasting phrase 'head and shoulders above the rest', but to appreciate those meanings requires considerable knowledge of American culture and English language, which are not uniformly shared in multi-ethnic USA, let alone international markets where the brand is also sold. Mentioning pyrithione zinc gives the company and brand an aura of authority and precise effectiveness for relief of dandruff, though Rose (1995) reports the disarming fact that even the scientific community is not sure why or how this specific chemical mix retards the growth of bacteria or fungi. As he concludes, products and their packages are a complex fusion of signs from culture and nature, through which large obscure corporations speak to and interact with consumers in daily life.

In general, the works of Dano (1996), Sherry and Camargo (1987), Klapisch (1995), and Rose (1995) offer worthy new insights on meaning via packaging, though some shortcomings exist. Klapsich's three-part taxonomy is fairly standard when juxtaposed to basic textbooks on marketing strategy. Also, across these authors, it is not transparent how their approaches or conclusions significantly advance prior meaning-oriented writings on packaging (e.g. Dichter 1975). In addition, none uses actual consumer data, except Rose's introspections, to verify or elaborate the role of semiotic communication goals in the meanings of packaging. Also, Rose's work in particular might have benefited from a more determined application of Peirce (e.g. types or stages of interpretants).

Names, logos, and trademarks

Brand names, logos and trademarks are possibly the most crucial semiotic intermediaries for meaning within a company's verbal and visual promotion strategies (Heilbrunn 1998a, 1998b; Lipovetsky and Roux 2003; Scott 1993; Semprini 1996; Zhang 1997). According to Henderson and Cote (1998), however, there has been limited scholarly research on the effects of these elements on consumers, with even less on meaning, other than to emphasize pre-testing such signs before finalizing them and

striving to encode meanings that are widely shared. Thus, there also exist many intellectual gaps in this domain. The primary ones that semiotic researchers have addressed have been, first, to identify and describe the principal sign components and their structures, and, second, to apprehend their different meaningful functions.

The most sophisticated effort to taxonomize logos (and trademarks) according to their sign nature has been accomplished by the Danish researcher Mollerup (1997). He adopts Jakobson's (1960) paradigm to identify six communication functions of logos (see also Heilbrunn 1998a, 1998b), from which he further develops ten types of logo objectives (e.g. uniqueness, holding power, graphic excellence). He then invokes Peirce's triadic model of signification (sign-object-interpretant) to explain how logos can trigger lengthy chains of meanings. Welding these ideas together, Mollerup constructs a complex taxonomy of logos and trademarks (see Table 1), provides extensive examples, and further differentiates each one according to Peirce's distinctions among icon, index, and symbol. For example, the Citroen company began as a gear-wheel factory in 1903 and designed a 'herring bone' gear that became so successful that the founder designed the company's trademark as two inverted Vs to designate a herring bone design. However, few consumers today are aware of this history of the automaker Citroen, and so the mark is *pictorial but non-figurative*. In contrast, Bilkuben bank uses a beehive-looking logo that has a *visual metaphorical reference* that consumers are invited to recognize from the natural world, implying that employees at the bank work together intensively for the safety and prosperity of the community. Mollerup's work is among the most innovative and enriching blends of semiotic paradigms for addressing meaning in marketplace phenomena.

Other scholars have followed in Mollerup's footsteps and developed more insights from Peirce's paradigm to specify the componential sign nature of logos. For example, the French scholar Heilbrunn (1997, 1998a) identified three kinds of logos: (1) the alphanumeric logo or logotype (e.g. IBM, Coca-Cola, 3M); (2) the iconic logo or icotype which is constituted by an image (e.g. Shell Oil's yellow seashell); and (3) the mixed logo (combining logotype and icotype). For illustration, Heilbrunn analyses the Shell logo as an iconic and indexical sign of the company's identity, including its origin (in maritime regions and activities), its name (the topological similarity between the icotype of the shell and the company's name Shell), and its main business (oil as a process of fossilization). In a parallel analysis, the American researcher Morgado (1993) examined clothing trademarks that represent animals (e.g. Izod alligator, Vanderbilt swan). She discusses first their iconic relationships, including how the emblems look like the real animal, but yet are caricatures with truncated

Table 1. *A semiotic-based taxonomy of trademarks*

Semiotic category	Principle of division	Taxonomic class with selected examples
Material qualities (concerning the trademark per se), i.e. What trademarks show	Dimensions (type and number)	Graphic marks: see below
		Non-graphic marks, e.g. shape of classic Coke Cola bottle
	Graphic form	Picture marks, e.g. Mobil's use of Pegasus as a trademark
		Letter marks, e.g. Mobil oil
	Picture form	Figurative marks, e.g. Apple Computer's use of a light bulb for its Newton model (suggesting bright ideas)
		Non-figurative marks, e.g. Citroen automobile's herring-bone trademark
	Letter combination form	Name marks, e.g. Golfin for golf courses, and the 'o' is raised to indicate a ball in flight
		Abbreviations: see below
	Abbreviation form	Initial abbreviations: see below
		Non-initial abbreviations, e.g. MetLife (for Metropolitan Life Insurance)
	Initial abbreviation form	Acronyms, e.g. NASA
		Non-acronyms, e.g. the IBM trademark with eight white horizontal lines cutting across the letters
Referential qualities (concerning the relationship between the trademark and its object), i.e. what trademarks mean	Visual reference	Descriptive marks, e.g. Paris fish restaurant Prunier that signals fresh quality via a man holding a large live fish Metaphoric marks, e.g. Bikuben bank in Denmark, where Bikuben means beehive and its visual trademark resembles a beehive

Table 1 (*Continued*)

Semiotic category	Principle of division	Taxonomic class with selected examples
		Found marks, e.g. the yellow shell for Shell Oil
	Linguistic reference	Proper names, e.g. Mercedes
		Descriptive names, e.g. Best supermarkets
		Metaphoric names, e.g. Jaguar automobile
		Found names, e.g. Next — the computer company founded by Steven Jobs after leaving Apple
		Artificial names, e.g. ELF — a French gasoline company

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bodies that, according to Morgado, reinforce a longstanding ideology about the role of humans in controlling nature. She then delineates indexical relationships (e.g. how the emblems are a function of socioeconomic status due to higher prices) and symbolic relationships (e.g. standing for the specific designer and a set of mythic associations, such as swans being attractive and erotic animals according H. C. Andersen's 'The Ugly Duckling' and the Greek legend of the rape of Leda).

The French scholar Jean-Marie Floch has also conducted a series of semiotic analyses of logos that is certainly among the broadest and most enlightening available today. In contrast to those mentioned above, however, his work is grounded in the Saussurian paradigm and related perspectives: (a) structural linguistics (e.g. Saussure's distinctions between syntagmatic and paradigmatic sign relations, Jakobson's six communication functions); (b) structural anthropology (e.g. Lévi-Strauss' theories on narratives, myths, and masks in primitive cultures); and (c) structural semantics (e.g. Greimas' semiotic square). Floch argues that logos must express differences so customers can easily recognize one company from another within a current marketplace (synchronic analysis), and yet there must be consistency through time to express the permanence of the

company's value system (diachronic analysis). For example, one of his analyses focuses on IBM and Apple computer companies (Floch 2000 [1995]). He contrasts the visual sign elements of their respective logos as IBM's monochromatic, straight, striped-block letters versus Apple's rainbow colored, rounded, and partially bitten apple. The former, Floch maintains, reflects a cold industrial, steel-beam design, whereas the latter represents an enjoyable natural object that also looks warm and festive. Based on additional information about the companies' histories and management culture, Floch argues that the IBM logo successfully communicates its longstanding brand strengths of stability and consistent service quality, while the Apple logo successfully expresses rule breaking, freedom, and conviviality. His other logo analyses include banks (Floch 2001 [1990]), perfume and toiletries (Floch 2000 [1995]), and chefs (Floch 2000 [1995]).

Other semiotic logo research has attended more closely to symbolism and mythology, while also producing some differing insights on the stability of meaning. For example, Merskin (2001) focused on Native American Indians in brand logos such as Sue Bee Honey and Crazy Horse Malt Liquor. She argues that the condensation of stereotypes in logos potentiate certain meanings that subtly preserve racist attitudes and social dominance. However, Bishop's (2001) semiotic analysis of sports logos concludes that each one's distinctive historical connection and reflection of loyalty to a particular team have been eroded by global consumption and the fickle desires of postmodern consumers to affiliate with successful teams, no matter who the teams are or where they are located.

Taken together, these varied logo analyses reveal that seemingly simple brand names, logos, and trademarks are signs that participate in a rich tapestry of sociocultural meanings, including mythologies of nature, technology, and ethnic groups, among others. However, because few of these works have been empirical and focused on understanding consumers' actual processing and outcomes, e.g. consumers' brand perceptions and memory, substantiation of the insights at the level of everyday actualized meanings remains to be provided.

Advertising

Advertising has been one of the most thoroughly studied topics in marketing and consumer research. For many years, an engineering model of communication (Shannon and Weaver 1949) led the majority of researchers to conceive of advertising as the direct transfer of brand information

to consumers, who merely receive and react to the message in the presence of varying degrees of noise. Due to this model, over the years linguistic messages predominated in advertising research, and the surface level of ads were characterized as either cognitive arguments or affective prompts, known respectively as central and peripheral cues (see e.g. Petty, Cacioppo, and Schumann 1983). As a result, there was much less progress in understanding pictorial messages or producing more nuanced conceptualizations of ad elements per se. Also, latent meanings were especially ignored since the focus for communication was on straightforward product features and benefits.

Advertising research based on semiotics originated in France (e.g. Barthes 1967 [1964]; Durand 1970; Porcher 1976), and is now the oldest and largest category of semiotic consumer research. As a whole, this stream of research has long been at odds with the dominant trends in advertising research as summarized above, and has offered numerous new insights on intellectual problems skirted by solely psychological, information-oriented research. In the case of meaning, the significant intellectual problems that semiotic advertising research has addressed are: (1) theorizing the selection and organization of ad components as signs; (2) revealing the meanings of those choices and structurings, especially the hidden or less obvious; (3) conceptualizing the consumer's processing of ad signs in terms of meaning; and (4) understanding the philosophical, historical, and sociocultural nature and effects of ad signs.

Sign structure of advertising. Sign structure has been examined across various levels of analysis. Among the most micro, the French-Canadian scholar Saint-Martin (1992) has parsed visual signs in terms of forms, colors, and vectors, and she has identified five groups of organizing rules that regulate the junctions and disjunctions between different signs and regions of a pictorial representation. For example, one group called topological relations involves rules labeled envelopment, emboxing, encasing, and monochromatic expanses. Saint-Martin (1992) illustrates her analytical framework through a visual ad for an energy conservation campaign in France. The ad shows a nude, muscular man struggling to rein in a large powerful horse, with the headline 'Maîtrise de l'énergie, maîtrise de l'avenir' (To master energy is to master the future). She segments the ad into 27 different sign regions, to which she applies her organizing rules to suggest how the meanings of mastery and energy are effectively communicated. For a comparable micro-semiotic analysis of visual advertising, see Kress and van Leeuwen (1996). Also, Larsen, Luna, and Perrachio

(2004) have built directly on Saint-Martin's research, and drawn from past semiotic analyses of cinematic communication, to develop a corresponding system for coding and interpreting the use of time and space in visual advertising. Together these micro approaches to coding signs and their functions offer penetrating new insights, and they open up exciting possibilities for future research to explore the impact of small systematic changes in advertising designs.

Moving up to a mid-level analysis, some researchers have decomposed ads according to signs of human characteristics (e.g. gender, hair style), kinesics and proxemics (e.g. facial expressions, poses), physical settings (location, props), and actions (e.g. Alaniz and Wilkes 1995; Holbrook and Stern 1997; Kernan and Domzal 1993; Knuf and Caughlin 1993). Several of these works are founded on the semiotic concept of codes (e.g. Budgeon and Currie 1995; Goldman, Heath, and Smith 1991; Hoshino and Tanaka 1989; Mortelsman 1998; Sullivan 1998), but they are highly varied in terms of the products, the ads scrutinized, and the novelty of insights. Among the more reflective analyses is Alaniz and Wilkes' (1995) focus on alcohol advertisements aimed at Mexican-Americans. They argued that through the choice and arrangement of Spanish-Mexican symbols (e.g. colors, historical sites, architecture) and actors exhibiting hypermasculinity and female passivity, the ads set up immanent meanings surrounding a crude, stereotypic image of sexuality and pseudo-nationality about Mexican-Americans. These troubling hypotheses expose the incisive potential of semiotics for public policies and social marketing issues that further research can examine.

Also at a mid-level of analysis, researchers of posters and ads have combined semiotics with the classical tradition of rhetorical figures such as rhyme and metaphor (e.g. Bachand 1992; Chebat 1988; Ehses 1989; Groupe μ 1992; McQuarrie 1989; McQuarrie and Mick 1996, 1999, 2003a; Rozik 1997). For instance, McQuarrie and Mick (1996) modified Durand's (1987) 20-category taxonomy of rhetorical figures, to increase its parsimony, theoretical force, and applicability to both visual and verbal rhetorical signs. Their framework is founded on the distinction between non-figuration and figuration (i.e. artful deviation). Of the latter, there are schematic figures (e.g. rhyme, antithesis) based on excessive regularity or overcoding (Eco 1979) and tropic figures (e.g. metaphor, pun) based on irregularity (called undercoding). In addition, schemes and tropes can either be simple or complex, which correspond to four operations among relevant signs in an ad: repetition (simple schemes), reversal (complex schemes), substitution (simple tropes), and destabilization (complex tropes). Combining these distinctions with cognitive psychological theories, McQuarrie and Mick (1996) derived hy-

potheses about the effects of different rhetorical figures on consumer responses. For example, due to their comparatively undercoded nature, tropes were predicted to produce more cognitive elaboration of meaning and more ad-liking than schemes. Subsequent experimental tests have supported several of these hypotheses (see McQuarrie and Mick 1999, 2003b).

At a higher, molar-level of analysis, the semiotic structure of many advertisements, especially television ads, has been likened to stories or folktales (e.g. Floch 2001 [1990]; Fukuda 1990; Kress and van Leeuwen 1996; Mick 1987; Stigel 1991; Urbain 1989; Vestergaard and Schrøder 1985). Accordingly, many ads incorporate a rule-based system that specifies the sequences of narrative elements, including settings and then episodes, which consist of a developing problem that evokes human reactions, goal paths, and outcomes. Based further on Greimas' (1983 [1966]) Actantial model, there are six key and invariant human roles maintained by characters in the narrative structure. The six roles form three pairs of opposites: subject-object, sender-receiver, and helper-opponent. Because people learn story structures in childhood during early listening or reading experiences, consumer comprehension of story-oriented ad signs can be rapid, perhaps even for a fleeting commercial, as Stigel (1991) proposes in the context of a ten-second Danish ad for bedding products. Moreover, a well-structured story ad is compelling not only because it is readily comprehensible, but also because it teaches and reinforces deeply held cultural values (see e.g. Fukuda's 1990 semiotic analyses of Japanese values and TV ads, based on Greimas, among others). The intersection of narratology and semiotics is a fertile resource for further studies and knowledge advancement. For example, it would be useful to explore and apply to story ads the three recurrent tests that make up the major episodes of narrative structure, namely, the qualifying test that establishes the main subject's credentials (competence), the decisive test of achievement (performance), and the glorifying test in which others recognize the achievement (sanction) (for an overview, see Budniakiewicz 1998). If these tests are not pre-established or observable within a story ad, then it is possible that consumers will question the credibility of the subject (e.g. spokespersons), the overall believability of ads, and the value of accomplishments derived through product usage.

Probing further meanings below the surface structure. The two most commonly identified categories of meaning are denotation and connotation (Eco 1976). The former involves the tightly coded primary meaning (sometimes the actual referent of a sign) and the latter involves loosely

coded and often implicit or subconscious meanings based on subcultural norms or personal experiences. For more recent research with parallel meaning categories, see Floch's (1984) discussion of the iconic versus the plastic levels of signification.

In addition to several of the studies noted above in regard to semiotic narratology, others have focused on symbolic signs and latent connotations emanating from cultural mythologies, (e.g. Arnold et al. 2001; Bachand 1988; Budgeon and Currie 1995; Chapman and Egger 1983; Domzal and Kernan 1993; Hutcheon and Hutcheon 1987; Porter 1992; Rudge 1999; Seiler 2002; Strate 1991; van Leeuwen 2001). For example, the American cowboy is saturated with mythic meanings of unlimited freedom, inner and outer strength, and a capacity to vanquish the wild. Analyses of cigarette ads by the Australians Chapman and Egger (1983) and beer ads by the American Strate (1991) have suggested that the portrayal of these products in the context of cowboy signs (American West clothing and outdoor settings, horse riding) potentiate meanings about outcomes and abilities conferred by these products (e.g. physical vigor, coordination, dexterity) that are medically contradictory to the actual consumption of cigarettes and alcohol.

More recently, Arnold et al. (2001) merged Jakobson's semiotics with institutional theory in an enlightening analysis of retail flyers and their meanings potentiated through mythic representations. The authors explain how Wal-Mart is particularly adept, compared to its competitors, at evoking the connotative meanings of a utopian and nostalgic American hometown with signs blended from the dimensions of family and community life in the United Sates.

Some consumer researchers who have sought to reveal deeper advertising meanings have done so by specifying oppositions therein, based on the Saussurean, Hjelmslevian, and Greimassian perspectives that meaning comes about from perceived differences among signs (e.g. Bertrand 1988; Floch 2001 [1990]; Langholz-Leymore 1987). For example, Bertrand (1988) analyzed the signs in a series of French ads for Black and White whisky. One depicted a family portrait that includes a white-draped angel sitting comfortably among imposing figures of death, all dressed in black (e.g. a witch, Darth Vader), with a tag line at the bottom, 'Ceux qui sont tout noir ou tout blanc, sont-ils vraiment de bons vivants?' Together, the picture and rhetorical question foster some puzzling connotative tensions, namely that life and death, as well as good and evil, are inseparable, and that alcohol's meanings are simultaneously and similarly polarized. Such semiotic studies of meanings below the surface of ads are evocative, especially those with implications for public policies related to potentially harmful products. But, as seen in several other strongly struc-

tural works reviewed here, most eschew actual data, focusing only on potentiated meanings, and thereby their insights seem less forceful than they could otherwise be.

Alternatively, some analysts have sought to specify connotative ad meanings by using Peirce's distinctions among indexical, iconic, and symbolic semantic relations, with consumer's actualized meanings as well (e.g. McQuarrie and Mick 1999; Zakia 1986). Zakia (1986) focused on an ad for Schnapple liquor in which an attractive woman wears a fashionable evening dress and delicately holds a glass of liquor. By collecting consumer data he was able to show more definitively the relevance of Peirce's semantic categories to real responses. Respondents were shown the ad and asked to immediately provide one word that expressed from their viewpoints the overall meaning of the ad. Zakia then grouped these words according to four thematic categories (sensual, sophisticated, exotic, and femme fatale) and applied Peirce's conceptual terms to the ad structure to suggest which signs functioned in which semantic fashion to potentiate these actualized meanings. Zakia then showed, for example, how the sensuality theme is upheld by (1) indexical relations in which the fourth finger on the model's hand points to her highlighted breast area, (2) iconic relations in which the woman's large pouting lips serve as a genital echo, and (3) symbolic relations in which the clinging dress, with the texture and look of a snake's skin, suggests temptation and magnetic force. Though Zakia's study is limited in sample and range of data, it illustrates well the promise of knowledge advancement available by combining semiotic textual analysis (regardless of paradigmatic perspective) with bona fide consumer responses.

Consumer processing of ad signs. Some researchers have made conceptual contributions to advertising research in their manner of theorizing the processing of ad signs based on Saussure (e.g. Fouquier 1988) or Peirce (e.g. Fry and Fry 1986). For example, the French advertising executive Fouquier (1988) has argued that ad reception is *an act upon a text*, since the surface of the text is composed only of signs such as shapes, sounds, and pigments. Furthermore, ad reception occurs *from a vantage point*, which means taking up a position in relation to what the consumer knows in order to evaluate, draw conclusions, anticipate future actions, and so on. Reception is also *a form of self-expression* involving a repertoire of knowledge structures, expectations, interests, and attitudes. Principal tenets from Fouquier (1988) and Fry and Fry (1986) have been supported and extended through a variety of subsequent empirical work, most of which has involved verbalized responses and qualitative analyses

(e.g. Aoki 1989; Bertrand 1988; Buhl 1991; Mick and Buhl 1992; Poddig 1995; Semprini 1996).

Another genre of conceptual models — drawing heavily from French semioticians such as Baudrillard (1981 [1972]) and Lacan (1980 [1966]) — has focused on the ego and desire (e.g. Aoki 1989; Boutaud 1998; MacCannell 1987; J. Solomon 1988), which have been largely overlooked by non-semiotic theories and research in advertising. Perhaps in no small coincidence, these researchers tend to focus on ads that emphasize sexual themes (e.g. for food, liquor, cigarettes, clothing) as consumer processing moves from the surface signs to personal meanings involving various fantasies and fears. For instance, the American sociologist MacCannell (1987) focused on erotic ads for jeans and argued that the signs constituted by commonly depicted poses and gazes are always reflective of a masculine perspective on sexuality (see also Shields 1990). That is, a male actor (or unseen male onlooker) is presumed to be ready for intercourse, though entranced in a sadistic desire wherein the desired object is in front, but just out of reach or control, of the desiring subject. This modeling of sexuality, according to MacCannell (1987), is precisely the process of desire that marketers would want to evoke in relation to their products because people tend to desire most strongly what they do not already possess. Empirical findings that support and qualify MacCannell's (1987) model can be found in Mick and Politi (1989) and Reichert et al. (1999).

Philosophical, historical, and sociocultural perspectives on advertising. Researchers have also maintained that advertising has become such a pervasive mode of semiosis in today's advanced economies that it is now an essential way of knowing the world, particularly through which the arbitrary and culturally determined are made to seem necessary and natural, even as a society is constantly evolving (e.g. Heiskala 1991; Leiss et al. 1986; Sherry 1987; Vestergaard and Schrøder 1985). A specific empirical example is Heiskala's (1991) longitudinal study of a Finnish magazine. He showed that families in 1985 ads no longer centered around the male head of the household, as they had in 1955, while women in 1985 ads were shown, more often than men, interacting with their friends and engaging in free-time activities (just the opposite of 1955 ads). Further related work from other cultures and magazines would be useful to see if these and other sociological trends are leading, lagging, or contemporaneous to related depictions in advertising.

At a more macro level of ad trends, the German scholar Kloepfer (1987) has argued that advertisements have become less mimetic (i.e. ref-

erential or informative) and more rhetorical or sympractic (i.e. stylized, complex, and involving). [See also Phillips and McQuarrie 2003.] Similarly, Americans Goldman and Papson (1996) and McHaffie (1997) have maintained that advertisers now intermix all sorts of signs as they rapidly develop new campaigns, constantly seeking to fracture existing codes in order to differentiate their brands. For example, Pedersen's (2002) analysis of the multi-layered meanings of breakfast cereal ads suggests that advertisers are playing with verbal and visual signs in more unexpected and aggressive ways, presumably to keep consumers from being as readily defensive or uncooperative in perceiving brand meanings that the marketer prefers and seeks to potentiate. As a result, a crisis in sign value is alleged to have risen in which the bind between signifier and signified has disintegrated to the point where connections to any real and identifiable referent have been severed (see also Chébat and Marchand 1998; Urbancic 1998). Nonetheless, the Japanese scholar Aoki (1993) has suggested that, rather than a simple main effect of increasing rhetoric or hypersignification in advertising, economic conditions may moderate this trend. Extrapolating from conditions in Japan in the 1990s, Aoki proposes that in declining economic periods advertisers may be less willing to challenge audiences with intricate or ambiguous arrangements of signs, and focus more on preserving brand solvency by strengthening the relation of advertising expressions to product meanings.

Summary and further directions

Scholarly work on packaging, brand names, and logos has been relatively limited in marketing and consumer research, with very few on meaning except for studies based on semiotics. Several researchers have drawn from Jakobson's framework of six communication functions and pursued intellectual questions surrounding the understanding of marketing goals and their influences on potentiated meanings in packaging, brand names, logos, and trademarks. Others have sought to identify, sort, and interrelate these signs, drawing most particularly from Peirce's paradigm and his distinctions among indices, icons, and symbols.

An important challenge for future research will be to carefully test and extend these insights with more consumer data. For example, taxonomies such as Mollerup's (1997) could be assessed through methods such as multidimensional scaling or cluster analysis to see if the derived solutions match the a priori categorizing. Similarly, experimental manipulations using graphic software — and the collection of consumer judgments,

inferences, and memory — could help further to cultivate and test semiotic insights on packaging, brand names, and logo/trademark designs. Also, as noted earlier, semiotic-informed experiments could be especially illuminating for public policy issues, building on works such as Rose's (1995) analysis of the dense and fuzzy language on a shampoo package and Morgado's (1993) and Merskin's (2001) analyses of logos that reinforce questionable, deep-seated ideologies and stereotypes. For example, subjects could view on a computer screen different versions of stimuli containing a stereotype (or not) and then, via the keyboard, provide their relative agreements for statements about potential meanings based on the stereotype (with reaction times automatically recorded). Faster agreements for some statements would suggest that those related meanings were likely to have been generated or intensified during exposure to certain stimuli (see Kardes 1988 on the uses of response latencies in similar consumer research).

As for other marketing issues that could be classified in stage two of Figure 1, but which have received little or no semiotic research, pricing may be the most conspicuous. Mick (1988b) noted 15 years ago that pricing was largely ignored by semiotic-oriented researchers, and that gap has not been filled in any manner since then. Perhaps prices can be analyzed across different categories, brands, and national settings in terms of (a) the similar or different Jakobsonain communication goals they serve, (b) their semantic qualities according to Peirce (e.g. symbolizing status; indexing high quality), or (c) their semantic oppositions in terms of Greimas' semiotic square (high/low/not high/not low). Studies of both potentiated and actualized price meanings are needed, with qualitative and quantitative data. Overall, pricing remains one of the most important and richest areas of marketing meaning that has yet to receive much attention from a semiotic perspective.

Semiotic advertising research, by contrast, is among the most matured and wide-ranging in terms of drawing on different paradigms and emerging from many different geographic locations. This is likely due to the lengthier history of semiotic advertising research and the fact that advertising is a high-profile and significant force in both developed and developing countries. A main intellectual problem has been theorizing the syntax or surface structure of ads. Semiotics has expanded the analysis of ad elements beyond references to central and peripheral cues by focusing on multiple types of signs and how they are organized in advertising. Using both Saussurean and Peircean paradigms, researchers have parsed ads at varying levels of sign analysis, from angles and shapes to rhetorical figures, and from human features and poses to sequences of settings and actions that comprise stories. As a whole, these works have conclusively

demonstrated how a close componential analysis of ad signs can elucidate the typically unnoticed manner in which signs cohere and interact within ads to potentiate meanings and to evoke actualized meanings. Hence, this research has advanced substantial new insights on advertising stimuli per se, which has been deprioritized in conventional advertising research where information-processing perspectives have focused most heavily on cognitive and affective psychological processes. Nonetheless, these semiotic works also reflect a persistent challenge observed in many scientific analyses; namely, the most effective number of levels of analyses, from micro to macro, is indeterminate and, most importantly, the ability to effectively synthesize them to make greater leaps of learning has yet to be achieved.

Prior advertising research has also emphasized surface-level information about brand features and benefits. Thus, a second intellectual problem addressed by semiotic advertising researchers concerns the theorization and specification of meanings below the surface of ad signs. Peirce's semiotics has proven especially useful, based on his index-icon-symbol distinctions. Other successful approaches based on the Saussurean tradition have focused on the presupposition that meaning comes about from differences. These works have emanated from French semiological frameworks in terms of the binary oppositions of traditional structuralism (e.g. life versus death) and the quadrinary oppositions of Greimas' semiotic square. When combined with theories of mythology, some of the most concealed meanings of advertising have been unveiled, especially in relation to advertising imagery. In doing so, these works reverse the proclivity in past research — based on economic and psychological orientations — to treat ad visuals as secondary or tangential to ad language. Recent book-length treatments on visual consumption (Schroeder 2002; van Leeuwen and Jewitt 2001) reveal in more detail how advertising research has progressed, in part, due to semiotics. Most of these works, however, deal only with potentiated or immanent meanings, and they leave the issue of actualized meanings untouched. Using interviews, cognition listings, inference measures, and the like, will help to remove this shortcoming and promote new advances of knowledge.

The leading semiotic contributions on ad processing, a third scholarly challenge, have come primarily through emphases on (a) consumers' creativity in interpreting ad signs (based on Saussure, Peirce, and Eco); (b) consumers' egos and desires (based on Lacan and Baudrillard); and (c) the epistemological status of advertising as a blueprint for everyday life. These also have been comparatively innovative insights relative to the purely engineering and information-processing models that have predominated in prior advertising research.

Nevertheless, there are limitations in semiotic advertising research that future work should strive to overcome. One is the lack of advertiser input — including why and how ads were constructed in certain ways to potentiate intended meanings — to combine with consumer data based on interviews and attitudinal measures. Pendry and Holmes' (1986) work is one notable exception, while Mick (1988a) has laid out a more detailed argument and broad semiotic framework for fostering research that intermingles advertiser and consumer data with the researcher's textual analysis of ads.

Another limitation to empirical semiotic inquiries on ad processing is the common presupposition of an engaged, imaginative consumer, as evidenced through the data collection designs in which ad exposure is forced and focused. This is not altogether misguided, as consumers do process some ads with concentrated interest. On the other hand, it ignores evidence that people routinely process only a fraction of the advertising they are exposed to. In one semiotic-based study where exposure was not commanded, findings suggested that multifaceted sign structures, which should draw more self-relevant, elaborative responses, did not result in better memory for the ads (Larsen and Alsted 1991). However, based on their earlier semiotic work, McQuarrie and Mick (2003b) recently found that complex pictorial rhetoric (e.g. metaphors) did lead to better memory and attitudes than simple pictorial rhetoric (e.g. rhyme), even when the target ads were embedded in a 32-page magazine and the participants were focused on the editorial and expository content. An important task of future advertising research is to apply semiotic paradigms and insights with more realistic assumptions about situational and psychological factors that may moderate the qualities of ad processing that semioticians revere (e.g. the role of self-expression, the enticement of rhetoric).

Potentializing and actualizing meanings of being there and buying there

The next stage of Figure 1 addresses locations where consumers interact and acquire products. Historically, as Baker (1998) notes, marketing researchers have primarily investigated these settings from a managerial and information-processing perspective on retail atmospherics, while giving little attention to consumer behavior more broadly, or the nature and role of meaning specifically. Recently, though, there has emerged a swell of new works on the meanings of place, space, merchandizing, and money (see e.g. Sherry's 1998a *Servicescapes*). Many knowledge gaps remain. Semiotic works have addressed three primary intellectual questions: (a) What are some of the dominant signs selected for acquisition sites

these days and how have they been arranged? (b) What influences do these have on potentiated or actualized consumer meanings and behavior? And (c) how can the process of actualizing meanings be characterized in relation to experiencing these sites, as well as buying there?

Signs and meanings of acquisition sites

The range of acquisition sites examined by semiotic-oriented researchers now includes shopping malls (e.g. Brottman 1997; Goss 1993; Gottdiener 1998; Hetzel 1997; Sandikci and Holt 1998; Shields 1994), hypermarkets (Floch 1988), department and company stores (Creighton 1998; Sherry 1998b), restaurants (Gottdiener 1998), entertainment parks (Brannen 1992, 2004; Gottdiener 1995), and small shops (Ceriani 1997; Hetzel and Aubert 1993; Kristensen 1995). Semiotic researchers have also focused on educational and public interest locations where varying degrees of merchandizing appear, including historical-geographic sites, museums, expositions, and festivals (e.g. Blundel 1994; McNutt 1986; Petr 1998; Umiker-Sebeok 1992; von der Horst 1997; Wilson 1991), and public spaces of landscape and transit such as beaches, gardens, cities, skyscrapers, and subways (e.g. Bell and Lyall 2002; Broadbent 1994; Fiske 1989; Floch 2001 [1990]; Gottdiener 1998; Larsen 1995; Pellegrino 1995). Given the multitude of these sites and our page constraints, we focus on some of the most commercial settings, namely malls, hypermarkets, and entertainment parks.

Malls and hypermarkets. Several researchers have focused on unitizing the environments into different sign categories and then analyzing the choices and combinations of signs in potentiating certain meanings for consumers. For example, semiotic-based mall researchers have stressed such extant sign features as linearity (or nonlinearity) of walkways, placement of escalators and atriums, height of ceilings, number of floors, color schemes, and music, in addition to the remote locations of windows, toilets, pubic telephones, drinking water fountains, and clocks (e.g. Creighton 1998; Goss 1993; Gottdiener 1998; Hetzel 1997, Hetzel and Aubert 1993; Sandikci and Holt 1998; Shields 1994). As a group, these researchers argue that the ordering of time and space through sign arrangements in these physical environments has a substantial but subtle influence on consumer psychology and behavior. They have also furnished a remarkable convergence of insights across multiple semiotic analyses and sites. For instance, the remoteness or lack of clocks and windows is

thought to create a sense of insulation against, and safety from, the outside world. Other common sign elements include trees, plants, water fountains and falls, streams, ponds, bridges, courtyards, and birdcages, and they are organized to replicate such settings as parks or country-village life. Many structural semiotic analyses of such sites use the concept of binary oppositions to reveal how meanings are made immanent through sign choices and organizations, including inside/outside, inclusion/exclusion, exotic/mundane, sacred/profane, clean/dirty, and fresh/stale.

The penultimate example of mall semiosis is the Mall of America (Gottdiener 1998; Hetzel 1997). It encompasses over 400 stores and 15,000 parking spaces, and has averaged during some periods up to one million visitors per week. The mall is a quadrangle, with each side developed as a distinctive theme experience (e.g. the East Broadway section is high-tech modern, and decorated in neon and chrome). Hetzel (1997) applied the semiotic square to his participant observations and derived four interpretive distinctions: (1) reality (e.g. the mall itself); (2) hyperreality (e.g. Underwater World, through which the consumer passes during 30 minutes on a moving pavement, from the muted Mississippi River to the colorful Gulf of Mexico); (3) non-reality (e.g. real looking plastic trees); and (4) fiction (e.g. Rainforest Café, which combines fake trees and odors with real animals). Hetzel argues that fascination with sites such as the Mall of America suggests that postmodern consumers no longer care to differentiate what is real from fake, or true from false.

In one of the most perceptive and now classic applications of Greimassian semiotics, Floch (1988) used the semiotic square to analyze focus group transcripts on the topic of hypermarkets and categorized the emergent consumer meanings according to four values. Floch termed these convenience, critical, utopian, and diversionary. He then translated those value-meanings into interior design complements that have urban expressions such as the roundabout, interchange, flea market, and public garden. A hypermarket was designed from his analysis, including different zones structured according to the four meaning positions. These included sign variations, for example, in the continuity of space (e.g. linear aisles for ease of pass through in the convenience zones) and in the height of ceilings and use of foliage (lower and more, respectively, in both the utopian and diversionary zones). Subsequently, Floch (2001 [1990]) and other researchers (Umiker-Sebeok 1992) have demonstrated the transferability and merit of these insights to other commercial locales.

In sum, numerous analyses suggest that the signs of many retail environments formulate fantastic, spectacular, forgotten, or even edenic settings, where traditional consumer behavior becomes secondary, if not disguised or epiphenomenal. These pseudoplaces, as Goss (1993) calls them,

merge entertainment, tourism, and vacationing with shopping and buying in a manner that dissolves many philosophical, economic, and socio-psychological distinctions of decades past.

Crossing cultures with site signs. Most semiotic work on consumer places and spaces have a within-culture focus, despite the increasing internationalization of entertainment and retail businesses. Semiotic analysis of the transcultural development of Disneyland offers insights into the conflict of constancy and flexibility faced in exporting consumption-environment signs (for a semiotic analysis of Disneyland within American culture, see Gottdiener 1995). According to Brannen (1992, 2004) and Brannen and Wilson (1996), Disneyland in Tokyo is creatively recontextualized in a specific Japanese construction of cultural consumption in two forms: making the exotic familiar (adaptation of signs and meaning) and keeping the exotic (accepting the imported signs and meaning unchanged). For instance, rather than planning the main street of Tokyo Disneyland as a nostalgic reproduction of small-town America, it was designed as a shopping mall (to appeal to the widespread gift-giving system in Japan called *sembetsu*), which visitors can access without an admission ticket for the main park (unlike policies at the American Disney park sites). However, it is also known that the owners of Tokyo Disneyland initially wanted an exact copy (an iconic representation) of the Anaheim Disneyland, to give Japanese visitors the sense of a foreign vacation. As a result, several original qualities were maintained (e.g. employees who walk the site dressed as Disney characters, such as Peter Pan or Cinderella). Brannen (1992, 2004) and Brannen and Wilson (1996) argue that the recontextualization of Disneyland layout and operations demonstrates that far from being dominated by Western ideologies, the Japanese differentiate their cultural identity in ways that reinforce their own sense of uniqueness and pre-eminence (cf. Sherry and Camargo 1987 on Japanese packaging). Beyond Disney, future semiotic analyses of international retailers are greatly needed, including such notable examples as IKEA and Wal-Mart.

Explaining the meaningful experiences of acquisition sites

Physical sites. To theorize the experience of acquisition site meanings, several researchers have drawn on semiotic concepts and developed related typologies or metaphors, often tied back to the structural analyses described above. One manner in which consumers experience and draw

meanings in these environments is through self-expression. Unveiling this point in semiotic detail, Umiker-Sebeok (1992) studied 41 museum visitors, including observations, interviews, and a survey. To analyze the data and construct a three-part model of museum consumption, she applied Peirce's stages of interpretants and his treatises on semantic relations. In the initial stage (firstness), the exhibits are perceived as presenting objects and activities similar to things seen before, and this iconicity invites participation, including numerous possibilities for further interpretation and behavior. In the next stage (secondness), the visitor experiences the newness or otherness of the exhibits (i.e. it is not what they are often exposed to), and thereby the visitor examines their indexical qualities, including how they link to reality outside of the museum. In the final phase of museum reception (thirdness), the visitor translates each exhibit as a symbol, according to habits and tendencies of interpretation, which are a function of his or her sociocultural setting. Visitors 'act upon the museum,' Umiker-Sebeok (1992: 53) concludes, 'dynamically building meaningful "spaces" in which to move and maneuver to their own advantage'.

Another important and related experiential concept in semiotic retail research is that of poacher. This concept is particularly advanced by researchers stressing how acquisition sites are overcoded (Eco 1979). For example, malls are designed with a variety of core and peripheral spaces, some strictly retail-oriented and others more leisure-oriented (e.g. game rooms and galleries). As a result, the mall becomes a place where different people with varied socioeconomic, lifestyle, and motivational characteristics pick and choose what they want their mall experience to be (Brottman 1997; Sandikci and Holt 1998; Shields 1994). For example, observations of consumers and data from secondary sources reveal that the main thoroughfares in many malls have been appropriated as climate-controlled athletic tracks for walking exercise, while some remote areas have become venues for loitering, drug dealing, and sexual trysts.

Other work focused on the experience of signs and meanings at acquisition sites has emphasized the concept of flaneur, which refers to someone who is wandering and prowling about (e.g. Floch 2001 [1990]; Goss 1993; Shields 1994). The flaneur is fueled by indistinct and evanescent desires that are evoked by such structural signs as winding walkways, soaring escalators, foliage, and fountains. Some researchers have also combined the flaneur concept with Greimas' (1983 [1966]) Actantial Model of narrative form and content to explain the flaneur's exploration as a search for a mysterious treasure that is thwarted or abetted by a number of environmental design features, conditions, and people along the way (see also Floch 1988; J. Solomon 1988; Umiker-Sebeok 1992).

Voyeur is another experiential metaphor used to account for processing mall signs and meanings (Goss 1993; Shields 1994). It involves the subversion of the commercial purpose for being in the mall and a large degree of surreptitious attention to other people's appearances and behaviors as a form of socially sanctioned peeping. Atriums with multiple floors and perpetual escalators, the meandering walkways, and numerous trees and benches — all facilitate a rampant public voyeurism.

One of the most condensed but encompassing semiotic studies of an acquisition site is Sherry's (1998b) ethnography of Nike Town Chicago. Sherry's observations, interviews, and introspections reveal how all four of the processing metaphors discussed above can be interrelated and simultaneously enacted. He also analyzes many of the sign choices and arrangements described above with respect to malls (music, escalators, creeks, effigies of celebrities) and weaves these into an experiential account of how a single visit can exhibit aspects of being self-expressive, poacher, flaneur, and voyeur. Sherry likens Nike Town to a basilica of basketball, honoring Chicago's patron saint, Michael Jordan, and he emphasizes that the experience is particularly sensual and bodily. Unlike most prior semiotic and non-semiotic accounts of consumer behavior that stress mentalistic experiences, Sherry shows how the various Nike Town signs stimulate all the bodily senses and draw consumers into a sacred community of interaction and spending.

Nonetheless, consumer reactions to the semiotic characteristics of malls may be moderated by a cultural form of expertise that Sandikci and Holt (1998) call mall literacy. They found that lower and middle class residents of an isolated American college town were much less disparaging of the area's lone shopping mall (an older facility with a single-level, rectangular design) than those individuals who had lived or traveled outside of the area, and visited contemporary malls such as the Mall of America. Thus, contrary to prior analyses implying that the various experiential-process metaphors (e.g. flaneur) are common to many visitors of a consumption site, Sandikci and Holt (1998) argue that such experiences and meanings are contingent upon the mall literacy of the consumer and the mall's design. Two semiotic studies in Paris — of the metro system (Floch 2001 [1990]) and the Pompidou Center (Veron and Levasseur 1991) — similarly found that groups of consumers vary in their experiences and meanings for the same constellation of signs at a given site, as a function of their backgrounds and purposes (see also Petr 1998; Wilson 1991). Taken together, these diverse studies focusing on consumers' experiences of acquisition and consumption environments are among the richest, most provocative, and most data-driven of semiotic applications to marketplace phenomena. They are also among the best in drawing from and

intermixing different semiotic paradigms to deal with both potentiated and actualized meanings.

Computers and the Internet. Much of the semiotic work on computerized communication has addressed the nature of systems generally, most usually their symbolic languages and logic at a micro-level (e.g. Andersen 1997). More, however, are now connecting computers and meaning to consumer behavior. For example, Höflich (1997) has drawn from Barthes to show that electronic communities, though highly dispersed and eclectic, are as guided and determined by codes of proper sign use as any other social group. Nonetheless, based on Eco's (1984) notions of intensional and extensional functions in communication, Janney (1997) has asserted that the computer monitor operates in those functions, respectively, as a mirror and an eye. As a result, he argues, email is especially problematic for expressing emotions about human relationships, roles, and identities because people can observe themselves narcissistically during communication in ways that do not occur in other spontaneous communication settings. In partial contrast, Venkatesh, Meamber, and Firat (1997) use a semiotic square analysis to suggest that cyberspace is being increasingly construed by marketers and consumers in terms of romantic meanings related to individualistic and artistic opportunities and to meeting ever-higher human needs.

These conflicting opinions above will not be resolved until more theoretical and empirical research is undertaken. One recent relevant study focused on personal web sites and self-presentation. Schau and Gilly (2003) investigated 326 sites and interviewed 35 individuals in regard to their personal web sites. The authors found, for example, that homepages incorporate various consumer brands and images that require neither financial means, nor actual ownership, nor proximity to the brand. As a result, the material, the immaterial, and the possible are interwoven in a complex semiotic mosaic unlike anything seen before in interpersonal consumer behavior.

Buying there

Aside from the intoxicating nature of many sites where consumers interact and acquire, the buying of products and services in those places can often be purposefully delayed, which is a topic that has been scantly studied from any consumer research perspective. The French scholar Darpy (1999) conducted a semiotic square analysis of consumer interview

data to understand the underlying nature and meanings of buyer procrastination. The analysis suggests two fundamental contradictions: (a) buy now versus not now and (b) wait until later versus do not wait until later. Darpy argues that procrastination is a blocking experience that moves from a relatively uncontrolled decision of not-now to a controlled decision of wait-until-later, and it should be studied more as an individual trait (like impulsivity) than the outcome of situational factors.

In terms of actual buying behavior, semiotics has also been used occasionally to address the sign value of money and credit cards. Dyer (1989), Hess (1998), and Klinck (1991) have argued that money has much more than exchange value as it partakes of, and mutually influences, a network of sociocultural motivations and meanings, including power and social hierarchy. In related empirical work, Feinberg, Westgate, and Burroughs (1992) maintained that credit cards are more than a convenient method of paying for goods or securing an installment loan. They hypothesized that there are also significant symbolic meanings that tie to consumer self-concept, such as the social prestige of being able to obtain and reveal the possession of certain cards. To test this hypothesis, Feinberg et al. (1992) collected survey data from consumers, including social-identity ratings based on ownership of particular credit cards (bank card [e.g. Visa], travel card [e.g. American Express], or department store card). The results were relatively intuitive, and confirmed that credit cards also serve as signs tied to different identity descriptions (e.g. rich/poor, proud/modest), and each of the three types of cards has a unique profile, with the department store card being viewed most negatively and the travel card being most associated with owner qualities such as cultural refinement and self-confidence. Further research could explore whether different socioeconomic classes and compulsive buyers are more or less prone to recognize the same profile differences among credit cards. Perceptual mapping and cluster analyses would also be useful to determine similarities among a larger assortment of credit cards, and then linked to a priori or a posteriori semiotic analyses.

Summary and discussion

Studies of the places and spaces of acquisition have been a low priority in academic consumer research, with rare attention to issues of meaning until recently. The related gaps of knowledge are being increasingly addressed by semiotic-oriented research, with a focus on understanding the sign nature of acquisition sites, the meanings made imminent by those signs, and consumers' actualized meanings and experiences. Next to the

topic of advertising, this semiotic research stream is now the most active. French and American scholars have predominated in advancing knowledge in this area, with structural analyses based on the Saussurean paradigm and French semiology prevailing. Greimas' semiotic square has been especially useful, with additional applications by Ceriani (1997, small retail shops) and Mei Alves de Oliveria (1994, shop windows). Peirce's semiotics has had some influence on this research stream (e.g. Umiker-Sebeok 1992), but it has been comparatively less than Saussure's. This trend may be partly due to the manifest importance of physical structure in conventional acquisition environments such as malls, and thereby they are readily amenable to theory and tools from structurally oriented Saussurian semiotics. Although most of these works are strongly linguistic and literary in their theoretical and analytical bases, several have been decidedly empirical, using observations as well as interviews.

Semiotic research on acquisition sites has helped to forge a number of new and accumulating insights. Among them are the notion that the choice and inter-mixing of signs from different eras, styles, and locales has rendered many sites an overflow of potentiated meanings that each consumer can select and actualize according to their own predilections. In addition, the increasing hypersignification of the sites problematizes the notion of what is authentic or not.

Nonetheless, there are still patterns that exist among acquisition site signs, and more comprehensive theory is needed to understand how and why these patterns continue to exist, and what their effects are. For example, the Danish research Kristensen (1995) pooled semiotics with rhetorical theory (from Durand 1987) to analyze a variety of storefronts and displays. He hypothesizes that many of these emulate rhetorical figures (e.g. rhyme, metaphor), and can be recognized and appreciated aesthetically according to different sign operations (e.g. addition, subtraction) and inter-relations (e.g. identity, opposition). Testing such ideas with consumer data (e.g. lingering time, satisfaction ratings for the store atmosphere) would be an important new step for theory and practice in retail semiotics.

In terms of experiential processes and the derivation of meanings, concepts such as poacher, flaneur, and voyeur have provided innovative theoretical implications that future researchers can draw from and expand on. For example, questions need to be answered more thoroughly about who, when, how, where, and why some consumers take on those experiential roles and others do not. Also, surprisingly, few researchers have connected semiotic narratology to shopping and buying, even though the notion of a consumer-hero or -heroine in a quest to overcome a problem (e.g. selecting a gift), and the facing of certain tests of qualification and

achievement, would seem to apply naturally in today's complicated, confusing, and occasionally deceiving marketplace.

There is also substantial need for more semiotic-inspired research that compares the intentions and decisions of interior designers and marketers with consumers' reactions. In addition, empirical research on consumer environments has been predominantly qualitative, usually based on nonparticipant observation, interviews, or introspection. There have been few attempts to measure consumer responses and to correlate them through quantitative analysis to a systematic coding of environmental signs. Having said this, however, future empirical research in this domain should not rely merely on self-reports. There is a need for more objective assessments of consumer behavior, such as actual time spent window shopping, foot traffic patterns, and so on (see e.g. Umiker-Sebeok 1992), and to relate these assessments to the design and interpretations of various environmental signs. For building more sophisticated theories of meaning in acquisition environments, there is also a distinct need to follow leads by Sandikci and Holt (1998) and Veron and Levasseur (1991) with research that determines the moderators of meanings related to procrastination, shopping, and buying, including a host of situational and personal factors.

Finally, the rise of powerful computerized resources and millions of new consumers on the World Wide Web lead to an urgent call for more theorizing and empirical research on the semiotics of the Internet as an unprecedented and evolving medium of global marketing and consumer behavior. The semiotic nature and meanings of virtual commerce are a research frontier we are just coming to face.

Actualizing meanings through experiencing, owning, and using products

The fourth stage in Figure 1 is a capacious category of consumption topics, extending from entertainment, leisure, fashion, and food to other specific product classes and more general constructs or processes. As a whole, marketing and consumer research became more meaning-oriented sooner in studying some of these topics than compared, for example, to product design or retail sites. This is likely due to an early influence of linguistic and literary theories on movie and television consumption, and occasional anthropological studies of clothing and food. Nonetheless, a full understanding of consumer meanings through experiencing, owning, and using products remains to be realized. Persisting intellectual questions that semiotics seeks to answer include (a) how does meaning become imminent or actually generated as consumers interact with products and (b)

what are some of the specific meanings in a given case? Replying to these questions often involves identifying the product signs in the certain context, how they are organized, and/or what particular type they are.

Entertainment and leisure

Movies. Christian Metz (1968, 1972), the forefather of modern film semiotics, argued that movement was the central sign system of cinematic realism. In a twist on that same theme, Cohen (1997) has provided a micro-analysis of the concatenation of camera shots and scenes in the movie *Natural Born Killers*. He focuses initially on the signs in the opening chaotic minutes, reviewing the shifting of angles, colors, close-ups, and speed of motions that constitute a new filmic surrealism that defies past codes of the industry. He shows that this fragmentation of sign organization also occurs at other levels of the movie (e.g. sequences within episodes). Although only weakly semiotic, Cohen's work persuasively shows how the jumbling of cinematic signs potentiates important meanings about the mental disintegration of the characters and a prevalent theme of violence in contemporary society.

At a more mid-level analysis, Holbrook and Grayson's (1986) inquiry on *Out of Africa* blended insights on signs and connotative meaning from Saussure, Barthes, and Eco with Peirce's notion of abductive inferencing. Holbrook and Grayson were among the first to detail how consumption signs are effective resources for artists and producers, and to suggest how consumers apply their knowledge of those signs to comprehend thematic meanings. Holbrook and Grayson focus on plot, characterizations, products, and developing events as the protagonist in *Out of Africa* transitions from an aristocratic European lifestyle to one of material and spiritual desolation in the wilds of Kenya. The eventual loss of her possessions through natural disasters and predators, the abrupt departure of her husband, and the death of her lover in plane crash, all converge on a central motif of life's impermanence. Holbrook's compelling analyses of movies such as *Gremlins* (in Holbrook and Hirschman 1993: 265–276), plays such as *Coastal Disturbances* (in Holbrook and Hirschman 1993: 277–285), and literary works by Homer, Goethe, and Joyce (in Holbrook and Hirschman 1993: 151–228) further reveal how consumer possessions and behaviors in entertainment media and other literary forms can make imminent many profound meanings about the human condition, especially surrounding materialism.

Hirschman is probably the semiotic-based researcher who has most focused on movies (e.g. 1987, 1991a, 1994, 2000), usually through the frame

of mythology (e.g. Barthes 1972 [1957]; Lévi-Strauss 1963 [1958]). She focuses on binary oppositional meanings related to norms and ideologies from the given macro societal context, and how these meanings are reconstituted and potentiated through sign choices and their organizations in movies. Parallel to Holbrook, many of the meanings she emphasizes circle around materialism, but with a more specific bent on the ethics of human choices between exploitation versus compassion or, more generally, secularism versus sacredness. For example, Hirschman (1987) analyzed sign structures in popular movies (e.g. the actors, objects, and events in the unfolding story lines of *Star Wars*, *Jaws*, *Grease*, etc.) and argued that several of the movies promote the message that law and morality (rather than science) keep human civilizations cohesive, and that clever and competitive people often acquire many possessions in life, but sacrifice personal relationships in the process.

Television. Semiotic studies on television parallel the approaches used on movies (see e.g. Hirschman 1988, 1991b, 2000; Passikof and Holman 1987; J. Solomon 1988). A long-standing researcher in this area has been John Fiske (1989). For example, he has addressed TV game shows and how their semiotic sophistication paradoxically serves the opposing interests of consumers and the show's producers. The appeal of shows such as *The New Price is Right*, according to Fiske (1989), is in how they simultaneously incorporate the discourses that subordinate women (e.g. the domestic mandate to know comparative prices for common goods and to romanticize expensive products) and those that empower men (e.g. controlling the show, celebrating capitalism). Merging the semiotic tradition of Barthes (1972 [1957]) with works by de Certeau and Bahktin, Fiske argues that there is a carnivalesque nature to the show that, among other things, unleashes back onto men the repressions of women's daily life (e.g. through raucous audience appreciation for the women's shopping skills). Holbrook's (1993) semiotic analysis of the same game show also suggests that its essential meanings are maintained through repeated validations of consumption-oriented greed.

Computerized entertainment. A few researchers have also focused on video arcades and games (Fiske 1989; Myers 1991, 1999). For example, Myers (1991) has applied Greimas' semiotic square and his Actantial model of narrative form and content to unveil the signs and meanings of three computer games. Each game is comprised of story-oriented interactions, strategic planning, and problem solving during ongoing conflicts.

Greimas' framework would propose a set of stable semantic relationships in the games revolving around the roles of hero, opponent(s), helper(s), and a sought-after object. However, Myers (1991) observes that the game sequences are actually recursive, as they continually mutate into unexpected complications and struggles. For example, there are often multiple opponents in one sequence, some who become helpers in a following sequence. Thus, as Myers (1991) warns, the semiotic square and conventional narrative analyses may be inadequate for understanding meaning in some forms of contemporary computerized entertainment. The strength of Myers' contribution is showing how the close analysis of a new consumption phenomenon can qualify fundamental theories and tools of semiotics. Further related work with consumer data could be beneficial also, including reaction times or verbal protocols while consumers are playing video games, and then mapping those data onto a componential semiotic analysis of the video content.

Particular products

Clothing/fashion. The semiotic analysis of clothing has continued over the years to be highly structural and strongly founded on the code concept (e.g. Cullum-Swan and Manning 1994; Floch 2000 [1995]; Kaiser 1990a, 1990b; Kaiser, Schutz, and Chandler 1987; Lannon and Clayton 1992; McCracken and Roth 1989). It has also been steadfastly based on the Saussurean principle that differentiation is the key to meaning, with codes representing, in part, the consumer's knowledge of distinctions among signs for interpretations and usages in given contexts. A noteworthy example is Cullum-Swan and Manning's (1994) study in which they observed t-shirts at different sites in North America. They identified eleven primary sign categories, also known as syntagms (e.g. origin, cut, and colors), which they then formed into groups known as paradigms in Saussure's semiotics (e.g. the technology used to make the shirt). The authors then proposed seven codes that pattern the syntagms and paradigms. For instance, one code is the t-shirt as a utilitarian undergarment (e.g. cotton, unadorned, worn beneath). Another is the t-shirt as a walking pun (e.g. with many differences in fabrics, colors, and cuts) that also fulfills a poetic function of affective importance, per Jakobson's (1960) semiotics. An example of the latter is a t-shirt that reads 'Salvador Dairy', with a picture of melting cows, and constitutes a verbal and visual pun on Dali's famous surrealist painting, 'The Persistence of Memory'. Related work with the semiotic square led the French scholar Marion (1994) to

theorize clothing as a rapid and adaptable form of semiosis that can be used to make oneself more or less noticeable and more or less apparent as a certain type of person. Overall, a focus on vestimentary codes and oppositions reveals that, far beyond warmth and protection, clothing also provides evocative meanings of group affiliation as well as psychological temperament.

Some semiotic studies have tested the putative linkages between the structural characteristics of clothing signs to interpersonal contexts and personal qualities. For instance, Kaiser, Schutz, and Chandler (1987) drew from Eco (1979) and argued that the meaning of shoes is extracoded (both overcoded and undercoded). The researchers surveyed 261 adults about their judgments of 30 different shoe styles (e.g. sandal, wingtip, two-tone pump) that varied according to several structural features (e.g. openness of toe, height of heel). The judgments were captured through semantic differential scales (e.g. old/young, formal/casual, unsexy/sexy). Factor analysis suggested the existence of overcoding insofar as only four factors were needed to explain over 90 percent of the variance in shoe perceptions, and these factors clearly split into the cultural categories of male, female, and asexual shoe styles. However, as evidence of undercoding, substantial gender differences among respondents' perceptions were also observed, indicating that for some styles in some situations it is problematic for shoe wearers to predict what their shoes will actually mean (e.g. while women may not intend sexiness in their business clothing, men may interpret such meanings nonetheless).

Experimental work by McCracken and Roth (1989) similarly examined and qualified the semiotic premise that clothing communication is based on well-accepted codes. Through professionally prepared photographs, the researchers manipulated the structural features of clothing ensembles (e.g. shoes, shirts, jacket) to create different combinations that conformed to certain fashion meanings (e.g. punk, suburban leisure) in the region of Canada where the data were collected. Adult subjects were then asked to rank the ensembles in terms of their correctness for a given meaning. Results showed a high agreement of rankings among the subjects, suggesting the strong presence of codes governing what is more or less correct for combining different clothing signs to communicate particular meanings. Nonetheless, the recognition of codes also varied depending on the social position of the individual subject (e.g. younger versus older) and the social characteristics of the specific fashion look, suggesting that the internalization of applicable codes was stronger among some consumer segments. Thus, there may be less standardization of clothing codes in the populace than previously assumed by some semioticians. These results largely conform to Kaiser et al.'s (1987) and extend them by revealing

moderators of clothing codes and interpretation beyond gender (see also Lennon and Clayton 1992).

Tseëlon (1992) has also emphasized codes in clothing communication, but in a more molar and diachronic (historical) orientation. She analyses the evolution of clothing in Western cultures, drawing on the three-stage theory of simulacra by the French semiologist Baudrillard (1994 [1981]). The classical era of clothing (fourteenth to eighteenth centuries) is called counterfeit, in which there was a direct linkage between signs and their meanings (people's sartorial behavior reflected actual social class distinctions). The modernist period (nineteenth to mid-twentieth centuries) is called production, in which technological developments such as sewing machines began to democratize fashion. Distinguishing the genuine from the pretend — in terms of clothing faithfully reflecting social class — led to the development of new and more contingent codes of etiquette about clothing. Finally, the postmodernist period from the 1960s forward is the simulation stage, characterized by a plurality of forms, fragmentation of styles, and diffusion of boundaries, i.e. an upheaval of former codes. The rejection of tradition, relaxation of fashion norms, and emphasis on individual diversity and variability of styles has decreased agreement on the meanings of styles. Empirical support for this current stage is partly seen in Kaiser et al. (1987) and McCracken and Roth (1989), but perhaps even more so in the code mixing and switching observed in a study of Haitian immigrants in America. Oswald (1999) found that they regularly alternated clothes from their homeland and their new American environment to accentuate or withhold certain meanings according to different social settings. For example, one informant mentioned her husband's reluctance to wear Haitian clothing at his American workplace because he feared it might make his employer and the customers uncomfortable. In sum, Oswald's semiotic research and numerous others have described and explained how clothing is a strategic, but not all together errorless, masquerade of signs at the intersections of self, society, and world (see also Balaram 1989; Kaiser 1990b; Landowski 1989; Marion 1994; Rucker 1992; J. Solomon 1988; Thompson and Haytko 1997). Taken together, these various works based on the concept of codes show how varied and sustained empirical research on a given substantive topic such as fashion can benefit from and mutually advance a foundational concept from semiotics.

Beyond strictly code-focused research, some studies have also analyzed clothing as a rhetoric of signs for potentiating meaning (e.g. Calefato 1992; Cerny 1993; Thompson and Haytko 1997). So far, only two rhetorical figures have been elaborated, metaphor and metonymy. For example, Cerny (1993) establishes some definition-level insights, one being that

clothing communicates metaphorically when a bulky, turtleneck sweater (suited for keeping a person warm) can imply that the wearer is amiable and sympathetic. Alternatively, the same sweater communicates metonymically when it is noticed on a stranger and reminds the perceiver of a category of individuals who wear a similar sweater (e.g. New England fishermen). The study of which situational or personal factors moderate these meanings is important, as is the application of other common rhetorical figures to clothing (e.g. hyperbole, puns, irony).

Food. Food and meals have also been studied from a semiotic perspective. Current research continues to examine them as codes of signs (symbols in particular) and their oppositions that communicate distinctions of social hierarchy, age, gender, and other demarcations induced in human settings (e.g. Boutaud 1998, 1999; Keating 2000; Kehret-Ward 1988; Levy 1981; J. Solomon 1988).

A recent example worthy of note is Boutaud's (1999) analysis of taste and the relationships consumers have with food. Applying the semiotic square, Boutaud sets up a contrariety between (a) the gourmet-connoisseur who is highly selective and refined in eating behaviors, with a focus on the mouth, and (b) the gormandizer who lacks discernment and eats in a more vulgar manner, with a focus on the stomach. The contradiction of (a) is the glutton who, like the gormandizer, is not selective, yet not as vulgar in their eating. The contradiction of (b) is the gourmand who has the gourmet-connoisseur's discernment, yet eats with more voracity and less refinement overall. In the end, Boutaud (1999) condenses these insights into a binary opposition between snacking and gastronomical eating. The former usually involves foods that are uncooked, convenient (punctual), mobile, and mass consumed, whereas the latter typically involves foods that are cooked, require long preparation, are individually consumed, and specific to certain locations.

In an earlier inventive work that combined Saussurean and Peircean paradigms, Verba and Camden (1987) studied food consumption through focus groups and surveys. Their use of the semiotic square for interpreting the qualitative data led them to identify a semantic structure of body images that they then represented as a continuum of meanings: (1) thin = in control, healthy, and desirable; (2) not fat = not out of control, not unhealthy, and not undesirable; (3) not thin = not in control, not healthy, and not desirable; and (4) fat = out of control, diseased, and undesirable. Facet analysis of the quantitative ratings of certain foods led Verba and Camden to further propose a series of binary oppositions about food semantics, including nutritious/delicious, vitamins/calories,

and nature/culture. They concluded that food perceptions and dieting among American consumers are strongly associated with repressing sensual desire to attain spiritual rewards, i.e. a triumph of the sacred over the profane. In more recent semiotic work, Levitt (1997) has proposed that intense media attention to suppressing food desires — through bulimia and anorexia — has strengthened the link between eating disorders and the goals of thinness and beauty, especially among young women. Empirical tests of these claims would be welcomed and could grab considerable attention in public policy circles.

Other product classes. Other semiotic research has focused on an array of consumer products, including vehicles (e.g. Floch 2001 [1990]; Lefebvre 1989; O. Solomon 1988), toys (J. Solomon 1988; Urbancic 1998), jewelry (Espe 1992; Mortelsman 1998), cosmetics (Dano, Roux, and Nyeck 2003), pets (Hirschman 2002), postage stamps (Scott 1995, 1997a), and domestic furnishings and utensils (Floch 2000 [1995]; Krampen 1995). Automobiles have been a popular focus for semiotic analysis, with their meanings often tied to Western science and technology, sociocultural status and power, and personal freedom and escape. One Barthian analysis revealed the semiotic potency of vehicle ownership and care-taking in Pakistan. According to Lefebvre (1989), truck owners there decoratively paint their vehicles, with the cabins and fronts reproducing mosques and Koran quotations, as these are believed to be seen first by God and other Muslims along the road. On the sides of the trucks are naturalistic renderings (e.g. mountains, lakes) and the name of the transport company. The backs often have large paintings of various kinds, and occasionally humorous phrases to entertain occupants of other vehicles behind. Lefebvre (1989) concludes that the ornate sign system on Pakistani trucks symbolizes that the driver is a courageous but religiously reverent adventurer who owns a beautiful, prestigious vehicle.

In contrast to vehicles, Scott's (1995, 1997a, 1997b) Peircean analysis of postage stamps shows how a diminutive and taken-for-granted commodity can also be an intricate case of semiosis. As noted earlier, Peirce's approach to theorizing sign-object relations (i.e. semantics) was based on the trichotomy of icon-index-symbol. However, he ultimately crossed those distinctions with his ideas about sign-interpretant relations and his hierarchy of human-sign processing (firstness, secondness, and thirdness). This effort produced a taxonomy of ten primary classes of signs, which eventually evolved into 66 classes (Hauser 1987). These more refined characterizations of semantics and meaning processes have rarely been applied in social science, much less to marketing or consumption phe-

nomena, as Scott does. For instance, he begins by noting that a basic stamp in Peircean terminology would be technically known as a *rhematic indexical sinsign*. That is, it is a sign indicating a specific place (country) and a specific face value (cost). In this sense, the stamp is 'a piece of colored paper ... whose semiotic integrity is guarded closely by the local post offices who issue them and by the Universal Postal Union which was set up in 1874 to fix the conventions of postal practice as observed internationally' (Scott 1997b: 193). However, many stamps are also uniquely produced to commemorate a person or an event through special format, design, or other features. In Peircean terms, these stamps would be technically known as *dicent indexical sinsigns* insofar as they make imminent a variety of meanings about the issuing culture and/or the focal topic (e.g. patriotism, achievement). Scott's analyses demonstrate how even simple objects can have elaborate and fluid meanings, and that the use of a more refined classification system of sign types and functions is necessary to fully appreciate meanings as they are potentiated and actualized in consumer products. Scott's work is an excellent benchmark and map for similar research on other important and mundane products, from clothing and vehicles to household accessories and work tools.

In another study of a common product through its related advertising, but from a Saussurean perspective, Floch (2000 [1995]) focused on the Opinel knife (often called the French knife in Europe), and contrasted its features, meanings, and self-concept implications with the Swiss knife. The latter has several different blades and tools, each for a defined task. The Opinel instead has only one blade, but it is purported that the Opinel can do most of what the Swiss knife accomplishes. The difference, Floch asserts in his analysis, has actually more to do with the users and their self-images than with the knives themselves. The Opinel calls forth and reflects intelligence as well as creativity from its owners, whereas the Swiss knife appeals in an opposite manner to those who want straightforward and standardized functions already well planned and designed into the product.

General functions and meanings in product experiences, ownership, and usage

Beyond specific products that are meaningfully experienced in daily life, there are substantive topics such as gift giving and general constructs or processes such as fetish, memory, and identity that are also facilitated by semiosis, and studied accordingly.

Gift giving. Gift giving is a pervasive area of consumer life in which scholarly insights have been directly advanced by semiotics (e.g. Mick 1991; Pandya and Venkatesh 1992). For instance, Mick (1991) applied the semiotic square to conceptualizations and evidence regarding consumers' inclinations to occasionally give gifts to themselves (e.g. to reward oneself, to repair a negative emotional state). The result was a four-category semantic structure of Puritanic, Romantic, Therapeutic, and Holiday self-gifts. He then linked these oppositions to demographics and psychological research to develop propositions about each category (e.g. self-esteem should be negatively correlated with the propensity to engage in Therapeutic self-gifts). Subsequent survey research tested and supported a subset of these propositions (Mick and DeMoss 1992).

Fetish and desire. Until recently, consumer researchers have given little attention to intense motivations such as fetish and desire. Dant (1996) has sought to critique and reconcile conflicting explanations of fetish from a semiotic perspective. Whereas Marx theorized fetish in terms of the exchange value of goods in economic relations, Freud characterized it as a condition in which objects are valued and consumed as substitutes for a suitable sex partner, and Baudrillard linked it to ostension through objects when they are used in social interactions. Dant (1996) proposes that fetish is a semiotic process in which products are venerated through displays and applications of their numerous distinctive capacities. Focusing on perfume for illustrative analysis, Dant contends that the popularity and influences of perfume are based on its abilities to alter the consumer's smell (function), declare membership in a specific social group (ostension), express sexual identity and arouse others' erotic interest (sexuality), demonstrate understanding of which aromas are pleasing (knowledge), explore the beauty of scent (aesthetics), and communicate this valuation with others (mediation). Dant concludes that perfume becomes increasingly fetishized as its multiple capacities and meanings are repeatedly deployed, and he proposes that this same process of desire and obsession readily pertains to other products and consumer experiences. Further research could reveal if and how these insights apply to other products such as jewelry, personal technologies, sports equipment, and so forth.

Memory. Two noteworthy works have also effectively addressed the topic of consumer memory and meaning for objects. Grayson and Shulman (2000) begin by noting that the Saussurean viewpoint on meaning (as being wholly arbitrary within linguistic theory) is the equivalent of

Peirce's characterization of symbolism. But because symbolism is only one kind of semantic relationship in Peirce's semiotics, they argue that the Saussurean tradition is inadequate to fully account for memory and meaning in regard to a consumer behavior topic such as special possessions. Grayson and Shulman maintain that memories are tangibly present in the many objects that inspire those memories, and this tangibility is especially evident in possessions that consumers consider irreplaceable (e.g. a wedding band received from a now-deceased spouse). Unquestionably, irreplaceable possessions have rich symbolic meanings for their owners, but if they were only symbolic signs with arbitrary meanings, then it should be possible to replace them with identical copies, without decrement in meanings or related memories. Yet, respondents in Grayson and Shulman's (2000) research denied the acceptability of perfect substitutes. In the authors' view, because the irreplaceable possession is causally connected to a given person, place, or event, it is also an indexical sign in Peircean semiotics, with a quality of co-presence that cannot be transferred to an exact copy of the original possession.

In a parallel argument elevated to the realm of mass society, the American philosopher Foote (1988) noted that in Peirce's paradigm, objects-as-signs differ from words-as-signs in many ways, with temporal durability being one crucial divergence. Durability enhances continuity of communication, leading to enhanced memory for individuals and society, and Foote details the principal advantages of this characteristic (e.g. durable objects can be left in place to facilitate successive communication without repetition, such as stop signs and occupational uniforms). He extends this insight by discussing several cases of object semiosis, including the development of objects to communicate successfully to future generations (e.g. about the dangers and locations of nuclear waste) and the processes by which societies lose object memory (e.g. about the University of Texas' main library tower where a sniper massacre was committed in 1966).

Identity. Semiotic analyses of products and consumption have also contributed to understanding identity (e.g. Askegaard 1991; Dano, Roux, and Nyeck 2003; Harms 1999; Fukuda 1994; Mark 1994). At the level of the individual consumer, there is a fascinating case study by Mark (1994) of a Mr. Sendat who was of French and Spanish ancestry. Mark's observations and interpretations draw heavily from Lévi-Strauss' notion of *bricoleur* — someone who is a resourceful tinkerer — to explicate Mr. Sendat's consumption behaviors as a semiotic representation of self, history, politics, and society. During his last three decades, Mr. Sendat was a folk artist who created airplane mobiles from discarded bottles, religious

crosses from nails, rope from pieces of twine, and animals from scrap metal, and he wrote philosophical poems on product brochures and wrappers, all of which he occasionally offered as gifts to friends and family. According to Mark (1994), these objects encoded deep tensions about Mr. Sendat's heritage as a rural cobbler and shoe merchant, as a Christian, as a Spaniard (for which he was taunted as a young boy in France), and as an extreme right-wing ideologue (for which he was charged with Nazi collaboration during WW II, and subsequently served a two-year prison term). Through his bricolage with product parts, Mr. Sendat continually negotiated, expressed, and created his self-concept up to his death at the age of 90.

Through a more encompassing framework and a large-scale cross-cultural survey, the Danish scholar Askegaard (1991) has maintained that sociocultural identity concerns questions such as 'where is our world and where does it stop?', 'who are we and who are the others?', and 'how are we related to each other?' He then posits that all the sign systems for communication and meaning within a society (e.g. language, rituals, mass media, architecture) create demarcations that serve as the cornerstones for the construction of cultural identity. This structure must be understood synchronically and diachonically, and reflects the inevitable tensions across two dimensions: collectivity versus individualization and stability versus change. Graphically, these dimensions can be drawn and connected to appear like a diamond (see Figure 5 in Askegaard). One significant implication of the model is the need for relative equilibrium in the structure. Cultures that hyperbolize one aspect, such as cultural stability through inflexible myths and traditions, risk various deleterious effects, such as an incapacity to adapt to environmental changes. Askegaard (1991) summarizes empirical application and support for the diamond model based on a study of 15 European cultures and 24,000 individuals who were questioned about their beliefs, lifestyles, and consumer behaviors.

Finally, with converging and extending macro insights relative to Mark (1994) and Askegaard (1991), the Japanese advertising executive Fukuda (1994) adopted Barthes' conception of myths and proposed a conceptual framework that focuses on sign systems such as music and advertising that transform as a culture moves from one era to another. Fukuda's 'Spiral model' asserts that many sign systems work in concert as they reflect the progressions and regressions of a culture as it coils between opposite states of axial human settings and perceptions (e.g. culture/nature, common/uncommon, yin/yang). The advancing periods of culture are manifested in behaviors (which also serve as signs) that emphasize materialism, outward appearance, new technology, individuality,

extravagance, and application. Alternatively, the retreating periods are manifested in behaviors that stress spirituality, inward appearance, naturalism, socialism, reservation, and basics. Advertising particularly contributes to these shifts as marketers strive to develop and position their products according to prevailing values and lifestyle trends. Writing in the early 1990s, Fukuda (1994) maintained that the 1980s were an advancing period for Japanese culture, whereas the mid to late 1990s, he forecasted, would constitute a return to a retreating period (which subsequent socioeconomic conditions largely bore out). Recent consumer behavior in America, precipitated by a stock market plunge and terrorist attacks, also appear to support Fukuda's model.

Summary and discussion

Semiotic research on the actualization of meanings through experience, ownership, and usage covers a wide range of products, constructs, and processes. Next to advertising and consumption sites, the study of entertainment/leisure and clothing are the next most prominent in semiotic marketing and consumer research. In the case of entertainment/leisure, the American researchers Hirschman, Holbrook, and J. Solomon, along with the British-born scholar John Fiske, have been at the forefront, with a primary emphasis on movies and television programs. Although none is French, they have relied heavily on semiological and structural orientations, both binary oppositions and narrativity analyses, to reveal with increasing precision how mythic connotative meanings are made imminent by the selection and arrangement of consumption signs. One drawback to this research, probably due to its linguistic and literary origins, is that it focuses almost exclusively on potentiated meanings and it usually lacks direct consumer data to assess the attributions to sign structure of certain processing implications as well as meaning content. Combining semiotics with the reader response tradition in literature (see e.g. Mick and Buhl 1992) could be a fruitful direction for this research stream.

By comparison, recent semiotic research on clothing has been successful at not only segmenting the phenomenon into discriminable sign units, but also in measuring or manipulating different combinations to study the effects of sign variations on meanings. These particular studies have been conducted primarily by North American researchers. Their work has shown how the code concept is still central to understanding clothing meaning, but it has also qualified assumptions about the level of agreement and the lability of codes (lower and higher, respectively) than

previously asserted. Hence, more scholarly work is needed in light of postmodern tendencies for pastiche and code-cracking, along with the fluidity of contemporary identities. More research is also needed, as Marion (1994) and Tseëlon (1992) have implicated, on the intentions, truths, deceptions, and desires that influence the choices and combinations of clothing signs. Such an emphasis would logically necessitate more collection of interpersonal data. Having said this, however, there has been an overemphasis on the social communication functions of clothing, and too little attention to the personal and private meanings of clothing (for an exception, see Corrigan 1992).

Semiotic analyses of other products have resulted in a highly assorted domain, involving multiple paradigms and emerging from multiple geographic origins. This large research arena underscores how no product is without significant meaning to someone or some group, and this includes not just culturally intensive products such as automobiles and toys, but also mundane products such as postage stamps and domestic tools. Also, semiotic consumer research has advanced beyond focusing on specific products, to augment knowledge about more universal topics such as gift giving, fetish, memory, and identity. Increased research attention to other central consumer research topics, such as brand preferences and choice as well as word-of-mouth behavior, would be a valuable step toward further validation of the merits of semiotics for marketing and consumer research.

General discussion

Meaning has been the focal point of a growing but still scattered assembly of marketing and consumer researchers. Our goals were to collect and integrate relevant worldwide research based on semiotics and to assess what it has provided for advancing knowledge on marketing and consumer behavior. From product design, logos, and advertising, to retail sites, entertainment, and commonplace possessions, we focused on the manner in which semiotics addresses and, in some instances, resolves intellectual questions about meaning at each stage of an expanded version of McCracken's (1986) model of meaning movement in society. We also discussed at each stage the trends and variations in the use of semiotic paradigms, methodological approaches, levels of analyses, geographic origins of scholarship, emphases on different substantive topics, and future research needs. Taken as a whole, our review uncovered a profusion, maturation, and rising value of semiotic research on marketing and consumer behavior since the mid-1980s. Reaching the final and bottom portion

of Figure 1, we now look across the separate stages and their individual intellectual challenges, to draw more encompassing conclusions on the nature, merits, and future of semiotics in marketing and consumer research.

Distinctiveness and value of semiotics

Our review underscores several advantages to a semiotic perspective for marketing and consumer research. Perhaps the paramount intellectual problem in dealing with meaning is its rather messy nature. Meaning has many forms and it is often multidimensional, subtle, concealed, multisensory, dynamic, and contingent on sociocultural and personal contexts. The most distinctive feature of semiotics is arguably its sizeable toolkit of interrelated concepts for describing and explaining meaning in a systematic manner. All are based on the atomic construct of the sign, which serves as the requisite component for communication and meaning. It is a flexible construct that is applicable to any physical or non-physical stimulus impinging on any of the human senses or faculties. From that foundation, semiotics confronts the complexity of meaning at different levels of analyses through a variety of taxonomies of signs and meaning, models of sign-meaning processes, and analytical approaches.

Semiotics also provides guidance to intellectual quandaries on meaning across Figure 1, which we now summarize in relation to specific semiotic marketing and consumer research. A prime question is, *what* is meaning in marketing and consumer behavior? Most definitions of meaning associate it with reference or sense (Ogden and Richards 1923). Semiotics does also through two mega-paradigms, Saussure's and Peirce's. Both have thrived in marketing and consumer research in terms of formally conceptualizing meaning across all the stages of Figure 1 and nearly every topic within each stage. For Saussure and his followers, meaning is mainly about sense and semantics (principally symbolism). As seen throughout this review, three of the strengths of Saussure's paradigm have been the sensitive attention it gives to (a) the nature and role of sign structure (selecting, organizing) and meaning creation; (a) the nature and role of sociocultural context in meaning (based in linguistics and on the indigenous arbitrariness of symbolic meaning) and (b) the dynamism or tensions that underlie meaning, as seen in its essential oppositional structure. For Peirce and his followers, meaning is both reference and sense. It is also very largely a pragmatic issue, observable in the effects that the relations among signs (syntactics) and the relations between signs

and their objects (semantics) have on individuals, groups, and societies. This review has also reconfirmed several strengths of Peirce's paradigm, including (a) the sophisticated model of knowledge and communication he proposes, with signs as the key mediators, (b) his taxonomizing of signs and sign relations, and (c) his phenomenological analysis of sign processing via different stages and levels of interpretants, plus different forms of inferencing.

In addition, semiotics addresses *why* meaning comes about in marketing and consumer behavior. According to our review, the dominant approach has been Jakobson's (1960) six semiotic functions of communication, and it has been mostly applied in product design, logo, and advertising research. In some cases researchers have melded Jakobson's approach with aspects of Peirce's paradigm, or taken the Jakobson taxonomy and developed it further into their own categories of motives or purposes for meaning (e.g. Arnold et al. 2001, Dant 1996, Klapisch 1995, Mollerup 1997). Other perspectives on the why of meaning have been related to the use of signs for preserving social class distinctions and dominance relations (e.g. logo, advertising, and clothing research) and maintaining or transitioning personal and cultural identity (e.g. packaging, advertising, retail sites, and possessions). Psychoanalytic arguments related to protecting or promoting the ego have also been combined with semiotics to spell out why the interpretation of signs occurs in certain ways (e.g. in advertising).

Furthermore, semiotics is particularly well suited to explaining *how* meaning comes about in marketing and consumer behavior. Semiotics addresses this question in terms of a focus on structure and process in sign phenomena. As our review showed across a variety of substantive topics, semiotic-based work often focuses first on unitizing the signs and sub-sign elements of whatever is being studied (e.g. ads, clothing, malls, vehicles). Special attention is then given to commonalities and differences in the choices and organizations of signs (e.g. identifying applicable codes, plus code adherence and code breaking). These componential analyses, from micro to macro levels, generally address the how of meaning at the syntactic plane of communication. On the plane of semantics, there are several additional approaches to understanding the how of meaning. These include (a) the specification of binary or quadrinary oppositions (semiotic square) in meaning as drawn from the Saussurean and Greimassian paradigms (e.g. research on product design, ads, consumption sites, clothing); (b) the distinction between initial denotations (reference) and richer latent connotations (sense), drawn particularly from Barthes, Hjelmslev, and Eco (e.g. product design, advertising); (c) the distinctions among icons, indices, and symbols, and other more intricate ones from

the Peircean paradigm (e.g. product design, brand names, advertising, everyday products); and (d) the catalog of varied rhetorical figures drawn from several sources, notably Durand (1970) (e.g. advertising, retail shops, clothing). Answering the intellectual problem of how meaning comes about is also done through explaining not only syntactic and semantic structure, but also focusing on actual sign processing and effects (semantics and pragmatics). Those works have drawn variously, for example, from Peirce (e.g. levels and stages of interpretants), Eco (e.g. model reader, overcoding), Baudrillard (e.g. hypersignification), and Lacan (ego), and have investigated the experience of signs with data gathered through introspection, interviews, and experiments (e.g. comprehending packaging, advertising, clothing, acquisition sites, etc.).

Other generalizations from the review

As the founders of semiotics, Saussure and Peirce remain the inspirations and guideposts for most semiotic marketing and consumer research. Saussure had the first influences, as his paradigm was applied by French scholars and practitioners in the mid-1960s who sought more compelling explanations of meaning in advertising, public communication, and consumer products. By 1990, Saussure's impact in this field of inquiry had spread across Europe and through Asia and Australia, and across the Atlantic to North America. During that 25-year period and since then, Saussure's paradigm has been used in research on a multiplicity of topics, including product designs and labels, packaging, advertising, shopping and buying environments, television shows, movies, fashion, food, and consumer myths, rituals, and possessions.

Peirce's paradigm emerged in marketing and consumer research several years after Saussure's, initially in the United States. Over the last 20 years it has proliferated rapidly, including applications across most of the same marketing and consumer topics as Saussure's and originating from many corners of the globe, from the USA (e.g. Grayson and Shulman 2000; McQuarrie and Mick 1999) to Asia (e.g. Kawama 1990; Zhang 1997) and Europe (e.g. Mollerup 1997; Scott 1995; Vihma 1995), including France (e.g. Heilbrunn 1997; Fontanille 1998).

In terms of more specific geographic origins and trends in research, French scholars have continued to remain at the forefront of semiotic research, addressing nearly all of the substantive topics in Figure 1. An important development in the spread and influence of French works' new English translations, most recently of Floch's research (2001 [1990], 2000

[1995]), which is among the most encompassing and enlightening of semiotic research in marketing and consumer behavior yet produced. Scandinavian and Japanese researchers have tended to focus mostly on product design and advertising. While North American researchers have also contributed new semiotic-informed insights to advertising, compared to other geographic origins, they have made their particular mark in studies of entertainment/leisure, retailing and consumption sites, and the ownership and consumption of products. Several scholars from other nations such as Italy, Germany, the UK, the Netherlands, and Australia have also made worthy contributions, with most emphases coming in the areas of product design and advertising. In the temporal span of our review focus, semiotic marketing and consumer research from other origins has been comparatively less, particularly from South America, Africa, and Asia (with the exception of Japan). Lower research support for academicians and a less powerful role of marketing and consumer behavior in daily life throughout those developing regions may explain these differences. Nonetheless, if the burgeoning work identified in this review is a reliable indication, semiotic marketing and consumer research is likely to grow more global in years ahead.

Another trend we observed relates to goals and methods of research. Though we have admonished some areas of semiotic research in marketing and consumer behavior for remaining relatively non-empirical (especially product design, logos, and entertainment studies), most have now embarked on data collection via observation and field notes, systematic introspection, and interviews, to complement the more linguistic and literary applications of semiotic concepts. Some leading examples are Cullum-Swan and Manning (1994), Floch (1988), Oswald (1999), Rose (1995), Sandikci and Holt (1998), Thompson and Haytko (1997), Umiker-Sebeok (1992), Vihma (1995), and Zakia (1986). At the same time, semiotics is no longer a strictly exploratory or descriptive approach; it is being used increasingly and more directly in theory building, including hypothesis generation and testing. This trend has been fueled by the increased use of quantitative data, mostly survey and experimental designs, with related statistical analyses. Some leading examples are Askegaard (1991), Damak (1996), Espe (1992), Larsen and Alsted (1991), Grayson and Shulman (2000), Kaiser et al. (1987), Krampen (1995), McCracken and Roth (1989), McQuarrie and Mick (1999), and Verba and Camden (1987). In our opinion, the future success of semiotic marketing and consumer research will depend considerably on more efforts to empirically corroborate, qualify, and extend semiotic insights using a variety of analytical approaches — qualitative and quantitative — including some yet to be applied (e.g. physiological measures).

Limitations and lessons learned

Our project was not without limitations. First, the model in Figure 1 is strongly based in a cultural anthropological tradition (following McCracken 1986) and may have unwittingly overemphasized the social and arbitrary aspects of meaning. Figure 1 also has the look of a transmission model of communication, with meaning moving linearly from left to right. Of course, meaning in the marketplace and consumers' lives is more vibrant, more circuitous, and occasionally more evanescent than such a model implies. We were sensitive to these concerns, since we also strove to emphasize the creative and adaptable aspects of communication and meaning as seen in various research we reviewed (per the construction model of semiotics, Hetzel and Marion 1995a). Nonetheless, it is possible that an alternative framework that is based more on uncertainties, chaos, loop-backs, and path dependencies would have brought out different insights and conclusions.

Our review also did not focus on semiotic research with a purer method-oriented or philosophy-of-science bent. Such works exist, and they suggest that semiotics can also refine data collection and analyses (e.g. Denny 1995; Perussia 1988) and the representation of theories and models (Grayson 1998).

Another potential limitation is that, despite our best efforts, we may have missed research from scholars whose languages we did not know or who are located in and affiliated with institutions we could not reach. More related scholarship could be taking place in South America, Africa, and Asia, and it would be valuable for researchers who are aware of this work to review and publish about the associated trends and progress.

Nonetheless, it seems that our concerted attempt to obtain materials from worldwide sources, and to join together with several assistants as a multilingual team of analysts, is rare. Few review articles in any field on any topic — especially those published in the United States — discuss research projects in other than one language (usually English) or from other than one geographic area (usually North America). Such ethnocentric scholarship has undoubtedly retarded the development and dissemination of knowledge in many research fields of global breadth, including the opportunity to identify redundancies and synergies, as well as anomalies and conflicts.

However, neither the rewards nor the challenges in completing an international review are easy to overstate. Our experience leads to certain advice. First, the need for multilingual and multicultural knowledge among the principal researchers is unavoidable. Relying solely on ad hoc translators, for example, who know the given language(s) but not the

theoretical or substantive areas thoroughly, is an awkward and risky strategy. Second, the timeline for completing an international review is inevitably longer than conventional reviews, requiring more complex and diligent planning of project funding, maintenance of files, and the coordinated analysis of collected materials. Third, the extended timeline can jeopardize the opportuneness of the review as the project finally reaches the write-up phase. Early sources of materials (e.g. via letters or computerized databases) may need to be re-engaged, as it is likely that many months, if not years, have passed since they were first consulted. Finally, the organization of materials and insights is proportionately more complicated for a global review. While some strategies for this important stage may be best if they are inducted from an initial reading of the collected materials, the sheer enormity of an international review, and thus the unfeasibility of re-reading the materials for a second or third time, suggests a definite need for a theoretically defensible a priori scheme in the primary analysis of the entire corpus of materials. In sum, we hope that our attempt at an international review of semiotic-based research on marketing and consumer behavior has piqued the interest of other semiotic researchers and substantiated its added value for assessing additional large bodies of knowledge that are dispersed and evolving worldwide. In so doing, a fuller and more accurate understanding of the value and limits of semiotics can be obtained, and then further advanced through ongoing scholarship.

Continuing controversies and further frontiers

Continuing controversies. Throughout this review we have acknowledged the historical and philosophical differences among semiotic paradigms, and their respective branches. As we have noted, Saussure's is generally regarded as more relativistic, and it tends to focus on dominant and immanent symbolic meanings. Alternatively, Peirce's paradigm is less strictly relativistic or focused only on symbolism, and more readily attends to actualized meanings. Certainly, there are extremes of the Saussurian and Peircean perspectives, perhaps most notably anchored by Jean Baudrillard (1994 [1981], 1981 [1972]) on the one end (hypersignification, meaninglessness, solipsism) and Charles Morris (1938) on the other (positivism, identifiable and predictable meaning, behaviorism).

There are less polemical positions, where more qualified viewpoints, and even combinations, exist. Some would argue, nonetheless, that the blending of Saussurean and Peircean philosophies is neither feasible nor desirable. This line of thinking can be contested however. For example, Rochberg-Halton (1986) has argued that the focus of Saussurean struc-

turalism on the identification of codes and semantic orders (e.g. binary or quadrinary oppositions) shares many predilections regularly attributed to positivism, not the least of which is the belief that the meaning(s) of something is invariable and independent of interpreter or context, and that the semiotic analyst has a privileged ability to uncover the imminent meaning(s) (see also Schrøder 1991). In addition, although Peirce's ontology posits an objective reality that Saussure never addresses, Peirce's epistemology is decidedly representationalist. That is, he believed that all knowledge, perception, and thought are mediated by signs, and that the connection of these signs to an independent reality is by no means assured or necessarily knowable in any ultimate sense (see Mick 1997). Thus, Peirce's philosophy has unmistakable relativistic strains as well. In fact, if there is one epistemological framework discredited by semiotics as a whole, it is the sort of hardcore realism that undergirds positivism (Sebeok 1986). Finally, as this review has shown at different junctures, both Saussurean and Peircean philosophies have been utilized in conjunction with quantitative or qualitative data. Neither of their original formulations includes any compulsory commitment to a specific genre of data-collection or data-analytic techniques. Taken together, these points indicate that claims of a necessary and continuing incommensurability between the Saussurean and Peircean paradigms are disputable, at least in the research milieu of the twenty-first century. Moreover, the repeated and unquestioned separation of these traditions could be detrimental to the fuller realization of the benefits of semiotics to marketing and consumer research. Indeed, as our review has exposed, there is ample evidence that integration of multiple semiotic paradigms is both possible and promising (see e.g. Ashwin 1989; Heilbrunn 1997; Holbrook and Grayson 1986; McQuarrie and Mick 1996, 1999; Mollerup 1997; Morgado 1993; Umiker-Sebeok 1992; Verba and Camden 1987). At the same time, more research is needed that draws from other semioticians who have been overshadowed by Peirce and Saussure, and to some degree by Barthes, Baudrillard, Eco, Greimas, Hjelmslev, Jakobson, and Morris. These include Benneviste, Kristeva, Lacan, T. Sebeok, and J. von Uexküll (see Bouissac 1998; Nöth 1990).

Another set of interrelated conundrums was unearthed in our research. One is the tendency of some researchers to use the term semiotics to characterize their work — perhaps because it sounds esoteric or intellectual — and then subsequently dodge the detailed application of concepts or tools from any identifiable semiotic paradigm or source. As a consequence, these researchers foster an unflattering impression that semiotics has little unique to offer in the pursuit of novel insights about marketing and consumer behavior. Another tendency is for some researchers to mention

semiotics and then caricaturize it by equating the whole with one of its subareas. Two of the most conspicuous examples are the strict identification of semiotics with structuralism or linguistics, which Sebeok (1984) ransacked 20 years ago. Other disputable connections include those that yoke semiotics strictly to research on symbolism, semantics, poststructuralism, or the subconscious (see Mick 1997). To the extent that those who are new to semiotics blindly accept these misleading characterizations, they will be unlikely to learn otherwise in the future or to apply semiotics in its fuller manifestations in their own work.

Another controversy about semiotics that may be impeding further developments and applications is the belief, or hope, that semiotics is a full-fledged theory which in-and-of-itself can lead to innovative predictions. It is true, as our review has shown, that new propositions about communication and meaning in marketing and consumer behavior have been derived with the aid of semiotics. Nonetheless, as Anderson et al. (1984) argue, semiotics is primarily a doctrine, philosophy, or perspective that is comprised of certain assumptions and concepts that assist in the description and, occasionally, the explanation of communication and meaning. In general, semiotics does not contain the sort of unified, law-like generalizations that serve as the foundational qualities of most theories (see e.g. Hunt 1983) and that regularly translate in different contexts into testable hypotheses. Hence, researchers who seek to generate new hypotheses about communication and meaning in marketing and consumer behavior must often coordinate semiotic insights with those from theories, concepts, and findings in other fields (e.g. rhetoric, psychology, cultural anthropology). This same call for an obligatory linkage between semiotics and the social sciences was made nearly a century ago by Saussure, yet its realization is far from complete. Without more progress on this front, the expectations and the perceived value of semiotics in marketing and consumer behavior will be too high and too low, respectively, as time goes on.

Finally, on a similar theme, some who have criticized semiotics have complained that its role in advancing knowledge and solving real intellectual problems remains unproven (see e.g. Bouissac 2003; Krippendorf 1992). However, this is not a responsibility that the best scholars and proponents of semiotics have overlooked or shirked (see e.g. Pinson 1993). Indeed, a main goal of this review was to show how semiotics is increasingly providing ground-breaking or distilled insights on communication and meaning across numerous marketing and consumer behavior topics (e.g. product design, advertising, retail sites), relative to prior extant knowledge on them. Certainly, the continuing development of enriching insights on meaning will depend on a thorough and accurate understand-

ing of semiotics. However, this requirement moves in the other direction as well. Those who are based in semiotics and seek to investigate marketplace phenomena and consumer behavior — and who often publish their works in semiotic-oriented journals — must also be committed to grasping current knowledge bases in marketing and consumer research, and juxtapose their latest work to those bases accordingly. In general, the most pervasive and lingering problem of semiotic marketing and consumer research may be the lack of comprehensive knowledge of semiotics or of relevant knowledge bases in marketing and consumer behavior, rather than anything peculiar or deficient about semiotics.

Further frontiers. One of the most pressing frontiers in all of semiotic marketing and consumer research is to address signs at multiple levels of analysis for the same topic area, and seek ways to isolate their main and interaction effects on consumer meanings and behavior. For instance, in advertising research this could include combining micro componential analyses of visual and verbal ad signs (e.g. Saint-Martin 1992; Larsen et al. 2004) with more mid-level analyses such as semantic functions (e.g. Zakia 1986 on symbols, icons, indices) and rhetorical figures (Durand 1987; McQuarrie and Mick 1996), and even higher-level analyses such as story grammars (e.g. Mick 1987; Fukuda 1990). This call applies across all marketing and consumption topics, including logos, malls, entertainment, clothing, and the Internet.

Another important frontier is spelling out and using in more detail the abundant resources of Peirce's paradigm. These include his multiple categories of sign-object relations, his characterization of sign-interpretant relations and stages of interpretants, and his other writings on logic in sign processing (deduction, induction, and abduction). Benchmarks for the more thorough uses of Peircean philosophy include Fry and Fry (1986), Mollerup (1997), Scott (1995, 1997a), Umiker-Sebeok (1992), and Zhang (1997).

In terms of substantive topics, there has been little attention to disposition behavior, including meaning-oriented research (for exceptions, see Foote 1988 on nuclear waste and Price, Arnould, and Curasi 2000 on special possessions). Indeed, our Figure 1 does not include a final stage of disposition, since there is minimal research to review. Yet, the nature and role of meaning within the questions of why, when, how, and where to dispose remain to be thoroughly charted in conceptual and empirical work founded on semiotics.

Another substantive area of marketing that has received little semiotic focus is sales presentations and negotiations, especially in cross-cultural

settings (for an exception, see McCreary 1987). Others that have received no semiotic focus to our knowledge include channels of distribution (except for the growing work on retailing) and market promotions (e.g. coupons, sweepstakes). Each of these is an area in which signs and meaning are multiform, complicated, and consequential.

Conclusion

Research on meaning in marketing and consumer behavior has flourished internationally over the last two decades, with many specific and indisputable knowledge contributions achieved across an array of substantive topics, through a variety of perspectives, concepts, and tools based on semiotics. Stimulating and evolving opportunities continue to exist for semiotic studies of the meaning of meaning in the commercial world.

Notes

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1. The number of works relevant to this review is very large, and only a portion thereof could be actually cited in the References section of this article. Contact David Mick ⟨dmick@virginia.edu⟩ for a fuller bibliography.
2. It is worth noting that we requested papers from many marketing and consumer researchers who have written about communication and meaning. Several, however, responded that they did not see their works as pertinent to a specific focus on semiotic-based research (e.g. Russ Belk, Melanie Wallendorf). Thereby, these individuals' research is not covered in our review.

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