Signage as Marketing Communication: A Conceptual Model and Research Propositions

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ABSTRACT

Further advancement of the growing knowledge base in the emerging, cross-disciplinary field of signage should benefit from investigation into *how* and *why* communication effects of signs occur, as such insights could potentially inform evidence-based decision-making. To facilitate such research, the authors propose a conceptual model of signage as a marketing communication tool. Model components include objective and subjective traits of signs, characteristics and states of viewers, contextual variables, conscious and intuitive process mechanisms, and communication outcomes, including affective, cognitive, and behavioral responses to signs. In addition to providing directions for further research, the model provides a framework for mapping published findings onto a "big picture," and for identifying missing pieces of the puzzle.

INTRODUCTION

Signage plays multiple, important roles in marketing communication, including identification of businesses, way-finding (Calori, 2007), branding (Bitner, 1992), and advertising (Taylor et al., 2005). As the oldest and most fundamental form of marketing communication, signage can potentially effect a broad array of marketing outcomes, such as purchasing and other consumptive behaviors, as well as the thoughts and feelings that precede and shape such behaviors. As but one example of the communicational role of signage, research has shown outdoor, on premise signs to be more influential as a source of new product information than messages conveyed by radio, internet, and newspaper ads. In the same study, indoor signs tied with magazines in a rating of perceived usefulness as an information source, but signs were rated as more useful than all media other than television (Kellaris, 2011).

Signs may also serve as inferential cues and basis for thin-slice judgments about the businesses they represent (Olson & Jacoby, 1973). This conjecture was substantiated in a series of studies conducted at the University of Cincinnati. A survey of business students found that

79% agree with the statement, "I can often infer the quality of a business from its signage" (Kellaris, 2010). A large, commercial survey of adult shoppers conducted by BrandSpark found 41.5% made quality assumptions based on a store having clear and attractive signage (Kellaris, 2012). Indeed, practical wisdom from the sign industry holds that a sign is to a business what a handshake is to a sales call (Taylor et al., 2005), i.e., a first impression and instant disclosure of personality.

Visual marketing can communicate with consumers through both conscious and non-conscious processes. Thus, signage may not only convey information and impressions – it may even *persuade* through non-conscious processing of design attributes. Consider, by analogy, the work of Henderson and Cote (1998) on logos. Their work demonstrates that design attributes such as the degree of naturalness (representative, organic designs), harmony (balance, symmetry), and elaborateness (complexity, depth) can influence outcomes such as true and false recognition, feelings, and shared meanings. When visual information is easier (versus more difficult) to process, people tend to like it more and perceive it as more credible. Hence design attributes of signage that facilitate processing should confer benefits of processing fluency, such as an object (brand, store, business) seeming more familiar and being better liked (Janiszewski & Meyvis, 2001).

Despite the undeniable importance of signage as a marketing communication medium and branding tool, there is to date no comprehensive, conceptual model depicting the relationships between attributes of signs, characteristics of shoppers and the conditions under which they view signs, the conscious and non-conscious processes by which visual communication shapes outcomes, and the broad array of outcomes that can be effected by signs as a result of these processes. Why is such a model needed? We contend that if designers, planners, businesses, and regulators are not fully informed concerning how signage operates, i.e., how it is processed by viewers, it cannot be optimally designed, strategically placed, effectively used, and fairly controlled.

TOWARDS A MODEL OF SIGNAGE COMMUNICATION

A conceptual framework is a theoretical road map that shows how we get from here to there. "Here" in this case, refers to signs – their design characteristics and placement. "There" refers to customers and prospective customers' reactions, including cognitive, affective, and behavioral responses to signs. Perhaps the simplest type of map would depict only here and there. We call that a stimulus-response model. Signs are stimuli and customer reactions are responses. To fill in such a map, one need only identify the various stimulus properties of signs and all the different types of responses, such as recognition, recall of information, affective evaluations, behavioral intentions, etc.

A better map, however, would depict not only here and there, but also the places in between – in other words how we get from here to there. In the parlance of psychological science, the places in between are known as mediators or intervening processes. They help answer the questions *how and why* this has an effect on that. General systems theory describes a three-component model consisting of inputs (signs), processes (thinking and automatic processes), and outputs (reactions to signs). This is an improvement over the simple stimulus-response model, but still lacks an important element: *who* is doing the processing.

According to field theory (Lewin, 1943), human responses are a joint product of environment (stimuli) and person (traits of individuals). Whereas a blue sign may look better to one person, a purple sign may look better in the eyes of another. Hence it would provide an incomplete picture to study, say, aesthetic judgment as a direct function of color without considering who is doing the judging, as well as the intervening how and why that leads to the judgment. Two individuals viewing the same object may arrive at different judgments because they have different tastes and preferences, they apply different evaluative criteria, or they use entirely different thought processes. For example, whereas one may critically evaluate each element of an object against a subjective list of aesthetic criteria, the other may make an instantaneous thin-slice judgment on the basis of a global impression. Hence the characteristics of signs, characteristics of the people who see them, and the psychological mechanisms used to process information are all important determinants of ultimate responses.

Yet another important element to consider in a conceptual framework is the "context" or situational variables that shape responses. The same person may process the same sign differently depending upon the situation. Examples of situational variables include shopping goal (i.e., recreational versus task-driven shopping), time limitations (leisurely processing vs. being in a rush), and contextual cues such as the proximity of a sign to other signs or its relationship to a building ("congruity").

Based on the afore-going discussion, the conceptual framework we propose has five main elements: 1. Design characteristics of signs, including both objective and subjective properties, 2. person traits, 3. contextual variables, such as the placement of signs and their relationship to the surrounding environment, 4. mediating processes, including conscious and automatic, unconscious processes, and 5. response variables, including cognitive, affective, and behavioral responses. This is a mere skeleton of the framework. The research literature as elaborated below puts some flesh on these bones, but it remains for future research to breathe life into the creature.

Design characteristics of signs

Signs can be characterized in terms of their design properties – the constituent attributes that comprise signs and convey information. Although there have been several published attempts to define attributes of signs (e.g., Calori 2007; Taylor et al., 2005), there is currently no standard, exhaustive, widely-accepted taxonomy describing the constituent design properties of signs. We propose that this is an urgent need because description is a *necessary but not sufficient condition* for higher goals of research, such as explanation, prediction, and influence of outcomes. Adam had to name the animals before Aristotle could classify them, Leonardo daVinci could dissect them, Darwin could explain how they got here, and Jim Fowler could control them during appearances on the Johnny Carson Show. The point is that taxonomy – description and classification – are requisite steps to further scientific discovery.

In delineating the constituent properties of signs, it is important to distinguish between *objective* characteristics such as size, shape, color, versus *subjective* characteristics, which are descriptive labels that viewers attach to objects. Objective properties reside within an object and comprise the object; subjective properties are intermediate reactions that reside within the perceiver. So, for example, one might characterize a sign as "attractive" or "interesting." These are not really constituent properties of signs, but rather viewers' evaluations. As another example, legibility is not an objective property of signs, but rather a perception on the part of viewers, as is "quality."

Here is a short list of objective properties gleaned from the literature: size, type (e.g., textual vs. graphic, static v. changing, digital v. non-digital), shape, material, colors, font (type and size), luminance, message content, informational density, and complexity. Each has been studied in some context.

To this list we can add subjective properties of signs – evaluative labels viewers may attach to signs, such as attractiveness, perceived quality, novelty/familiarity, interestingness, perceived complexity, legibility, perceived clarity/ambiguity, congruity with expectations (or "surprisingness"), and congruity with architecture or surrounding environment ("aesthetic congruity"). Objective properties such as size, shape, materials, and colors should combine interactively to create subjective impressions such as attractiveness, interestingness, etc. Moreover, certain properties such as complexity or informational density may operate through the subjective filter of perceived complexity, font and size through a subjective filter of perceived legibility, etc. (Note that whereas perceptions of complexity tend to diminish over repeated viewings across time, one person's complexity can be another person's simplicity. Similarly, the same size and font will be differentially legible to Superman versus Mr. Magoo.)

The above lists represent an initial attempt at identifying potentially important objective and subjective properties of signs. Perhaps additional properties can be identified by surveying designers and manufacturers of signs. Although properties were delineated, they were not classified. Further refinement of this scheme – adding to the list and classifying elements into a taxonomic order – is a task commended to future research efforts.

Person traits

There are many ways to characterize individuals who compose the audience for signage. The challenge is to identify a relevant set of traits that have some explanatory power to elucidate the processing of and responses to sign communication. On the basis of our review of the marketing communication literature, we propose the following:

Age. *Due to declining fertility and increasing life expectancy, the average age of the population is increasing (Weil, 2009).* Age matters because both visual acuity (Klein et al., 1991) and cognitive speed (Salthouse, 2000) vary across age groups. *Those of us who have had the experience of fumbling for reading glasses or asking an excited young person to repeat something a little slower intuitively understand visual acuity and cognitive speed. These issues have profound implications for signage communication, because as the population ages signs get a little fuzzy and we cannot read them as fast.*

***Fa*miliarity**. Familiarity of a stimulus is a function of amount and frequency of exposure. In the case of signage, highly familiar, frequently encountered signs should be processed differently than unfamiliar signs upon first encounter. The literature indicates that familiarity has several effects, such as reducing perceived complexity of a stimulus (Cox and Cox, 1988) and, *ceteris paribus*, increasing liking of a stimulus (Zajonc, 1968). Generally, exposure increases familiarity and familiarity enhances information processing, including both recall and the acquisition of new information (Johnson & Russo, 1984). However, there is some evidence to suggest that extreme familiarity can reduce recall and learning of information (Edell & Keller, 1989). Thus, it would seem prudent to consider not only the characteristics of a sign, but exposure conditions and audience familiarity as well.

Internal states. Information is processed differently depending upon internal states of the perceiver, such as arousal and affect. Arousal tends to have the ironic effect of attracting more attention, but interfering with acquisition of information (Eysenck, 1982). Theory and evidence also show that affective states (such as elevated or depressed moods) influence information processing (Isen et al., 1978). In general, people in good moods are more receptive to information – particularly positive information (Wadlinger & Isaacowitz, 2006); however, they may ignore it if it holds potential to deflate their mood ("mood preservation hypothesis" per Goodstein, 1994).

Motivational predispositions. Processing may also be influenced by differential motivational states and traits, such as the need for cognition (Cacioppo, Petty, & Morris, 1983) or the need for cognitive closure (Webster & Kruglanski, 1994). Need for cognition refers to the extent to which people enjoy and regularly engage in the process of thinking. Individuals characterized by a high need for cognition are internally motivated to process information such as that communicated by signs. Individuals characterized by a low need for cognition may be thought of as "cognitive misers." They are not lacking in intelligence, but they only think when they have to think. Thus, they are less apt to process information found on signs unless there is some compelling reason to process it or they are externally motivated to do so. The need for cognitive closure refers to individuals' desire for a definitive conclusion. An individual with a high need for closure is decisive, prefers order and predictability, and dislikes ambiguity. Such individuals are prone to form quick judgments and to stick with them. Individuals with a low

need for closure will not rush to judgment. Rather, one will take their time to process and decode information.

In most cases, the audience for signage would be composed of a mix of people low and high in the needs for cognition and cognitive closure. Creators, users, and regulators of signage could benefit from an understanding of how a given sign may be processed quite differently (or not at all) by different members of an audience as a function of motivational states. As an example of an implication for design, signs should be constructed to represent brands/organizations and convey messages though multiple routes, including both conscious and automatic, unconscious processes (Courbet & Fourquet-Courbet, 2014), because communication takes places via different routes for individuals characterized by different motivational states or traits. As an example of a regulatory implication, consider that in some cases signage may be like a warning label on a bottle of medicine. Informational content may be there, but it may not be processed as intended by some audience members due to the format. Hence, to be meaningful to the public, regulatory guidelines should be developed on the basis of how information is likely to be processed and used.

Attentional states. Attention is a requisite condition for visual information processing. One cannot attend to all information in one's environment without being overwhelmed by information overload. Hence, perception is selective. People tend to filter out less relevant information and attend to relevant information. Such is the case when one is consciously looking for or reading a sign. Yet the task is often performed under conditions of divided attention, as when a shopper is driving to a store. The strategic placement of signage can help mitigate some of the challenges to information processing imposed by divided attention, but cannot fully overcome common distractions during exposure, such as attending to the road, attending to GPS directions, attending to passengers, radio, mobile phone, etc. Hence a comprehensive model of signage communication must consider the attentional state of viewers as it is likely to shape the processing of information from signs.

Contextual variables

There are three contextual issues that seem particularly germane to the processing of information from signage. All three relate to placement. The first is the distance of the sign from viewers, (or average distance given a distribution of viewing distances), which will influence visibility, attention, recognition, legibility, and attendant processing of the information. Obviously this variable will interact with size to influence outcomes. When size and distance combine to reduce processing fluency, effortful processing may either not take place ("too hard") or will evoke the unintended negative consequences of meta-cognition (Schwartz, 2004).

A second contextual issue is that of perspective or angle of view. Research indicates that the same message or object viewed from different angles will be processed differently. For example, in a seminal study of camera angle effects, Kraft (1987) found differences in comprehension, recall, and evaluations as a function of vertical angle. He speculated that angle effects may stem from our experience in the natural visual world. Looking up *at* an object, as a child looks up at an adult, may translate to looking up *to* the object. Meyers-Levy and Peracchio (1992) examined the influence of camera angle on attitudes toward products pictured in ads.

They found that products were perceived as strong or potent when photographed from low, upward-looking camera angles. The same products were perceived as relatively weak and inferior when photographed from a high, downward-looking angle. This effect, however, may depend on the amount of processing viewers devote to the ad (Peracchio & Meyers-Levy, 2005). The implication for sign placement seems straight forward. A ground-mounted sign that people look down on will be perceived differently from the same sign mounted up on a building, even if the signs are otherwise identical in design and content. Regulators and users of signs should consider potentially deleterious effects of down-angles when determining the placement of ground-mounted signs.

Yet another placement issue concerns where a sign lies within a viewer's field of vision. When an object is squarely in a viewer's field of vision (within 1.5 degrees of the focal point), the visual signal is sent to both hemispheres of the brain. However, when an object is outside the focal range, contralateral conduction takes place (Beaton, 1985). That means whereas an object placed to the left of the main focus will be sent to the brain's right hemisphere for processing, an object placed to the right of the main focus will be sent to the brain's left hemisphere for processing. Whereas hemispheres have different processing styles, a peripherally placed object may be evaluated differently. Janiszewski (1988) tested this idea with ads placed to the right or left of focal newspaper articles and found that whereas pictorial ads placed in the left visual field were evaluated more favorably than those placed in the right visual field, verbal ads placed in the right visual field were evaluated more favorably than those placed in the left visual field. It appears that people form pre-conscious attitudes toward objects (such as ads) and that these attitudes can be swayed by mere placement of the object within the visual field. By analogy, verbal information conveyed by a sign placed in the right visual field of most passers-by and pictorial information conveyed by a sign placed in the left visual field of most may generate the most positive impact. We say *may* because we are not aware of published field tests that have examined this directly in a signage context. But, if your business were on the left side of a one-way street, we would advise a pictorial sign mounted at drivers' eye level.

A third contextual issue is that of a sign's relationship to its surrounding environment. There is a vast literature that suggests an object will be perceived, remembered, and evaluated differently depending upon its immediate surroundings ("context effect") and its relationship to its immediate surroundings ("stimulus congruity"). If a sign is highly distinctive – larger, more colorful, or otherwise different from other signs in the immediate environment – it may effectively attract attention, but the incongruity makes it more effortful to process. Ditto for signs that are aesthetically incongruent with the surrounding architecture of which they are a part. This could have a number of unintended consequences, such as negative evaluation. Ironically, such incongruous signs may even be less memorable due to the absence of a pre-existing cognitive schema, i.e., a pattern of thought that facilitates the organization of information in memory (Heckler & Childers, 1992; Meyers-Levy & Tybout, 1989), and due to weak linkages in established associative memory networks (Schmitt et al., 1993). The relationship between stimulus congruity and outcomes such as remembering and liking is not strictly linear. A moderate amount of incongruity can tickle interest, particularly if the incongruity can be resolved with a little effort, which leads to enhanced liking and recall. Thus, from a marketing communication standpoint, there is no reason for signage to be maximally

high in congruity with the surrounding environment. Slight incongruity may be perceived as interesting, novel, or creative.

Processes

There are a number of psychological processes by which exposure to signage may lead to various consumer responses. These include both conscious and unconscious processes.

Conscious processes occur when one looks at a sign ("attention") and attempts to read or otherwise interpret meanings conveyed by the sign ("perception"). Once a basic message has been decoded, other processes such as memory (encoding and storage) and evaluation can occur. These processes are generally well known and well understood. To be effective as a marketing communication medium, signs must attract and retain attention, be easily understood, easily recognized, and evaluated positively.

Unconscious processes, by contrast, are generally less well known and less understood (Courbet & Fourquet-Courbet, 2014). Yet they may offer better explanations for how signage works. They may be the more powerful forces underlying sign communication.

One example of an unconscious process is meta-cognitive experience. Meta-cognitive experience refers to the experience of thinking ("processing fluency" per Schwarz, 2004). Thinking can be relatively easy or difficult, depending upon what we are thinking about. A growing body of research evidence shows that people tend to use the ease or difficulty of thinking as information in its own right. So, when the information conveyed by a sign is easy to process, easy to understand, and easy to retrieve from memory, the information tends to seem more familiar, liked, trusted, believed, evaluated positively, etc., as previously noted. The reverse is also true. Signs that are difficult to process, understand, or recognize, may seem unfamiliar and disliked despite repeated exposure. Such processing fluency effects take place without conscious awareness. That is, they are automatic – they just happen.

Yet another example of an unconscious process is associative learning or conditioning. Recall Pavlov's dogs. Evidence from the marketing and psychology literature suggests that humans' responses may also be conditioned through unconsciously learned associations. For example, when people like the features in an advertisement, such as the background music, they tend to develop a liking for the advertised brand by association (Gorn, 1982). By analogy, if people like the design features of a sign (e.g., colors, pleasing design), they may "learn" to like the brand or organization represented by the sign simply by association. Like processing fluency effects, conditioning takes place automatically, without the conscious awareness of individuals. People form attitudes, which later translate into intentions and behaviors.

Thin-slice judgment is yet another process by which people formulate lasting impressions. Thin-slice judgment is an effortless, automatic process that takes place without conscious deliberation (Bargh, 2002). Popular sources describe the phenomenon as a sort of intuition, an instantaneous impression (Gladwell, 2005). Given that consumer audiences are often not highly motivated to process commercial signage, and given that signage is often viewed from a moving vehicle under conditions of divided attention, it seems likely that thin-slice judgment would play a role in the "processing" of signage. Thus, signs designed under an assumption that people will stop, read, and think, may not be as effective as those designed under an assumption of thin-slice processing. Because thin-slice judgments are made on the

basis of quickly accessible cues, the design features of a sign might be more significant than the verbal message content (Peracchio and Luna, 2006). In fact, in thin-slice judgment the design features *are* the message content.

There are still other psychological mechanisms that operate in the cracks between conscious and unconscious processing. Anchoring and adjustment is one such process (Wilson et al., 1996). Upon initial exposure to a stimulus (sign), people may form an impression that becomes a strongly held attitude. Upon repeated exposure to the stimulus (sign), people may gain additional information or have additional thoughts that lead to an adjustment of the initial impression. These adjustments, however, tend to be slight and may never overcome the initial impression. One possible reason for this is so-called "selective hypothesis testing" (Cronley et al., 2005). Once people have formed an initial impression or opinion, they tend to gather additional information selectively to confirm their opinion, ignoring other information that might conflict with that opinion. Although anchoring and adjustment involve conscious thought to form the initial opinion, people are generally unaware of their proneness to selective hypothesis testing. Thus, the tendency to "seize and freeze" on an opinion may be thought of as an automatic, unconscious process.

Outcomes

There are many outcomes of interest in sign communication. For the purposes of our conceptual framework, we can categorize these as cognitive, affective, and behavioral responses.

Cognitive responses are thoughts. They include perceptions, interpretations, recall and recognition – the identification of signs previously encountered, the formation of attitudes (toward the sign itself and toward the brand or organization represented by the sign), evaluations, impressions, beliefs, opinions, associations, aesthetic judgments, certain types of learning, persuasion (trusting a source and agreeing with a message), and so on. The common theme underlying these variables is thought. Cognitive responses are products of conscious thought, and the responses reside inside the heads of individuals.

Affective responses refer to emotions and feelings. Signs may elicit feelings of pleasure ("this sign makes me feel good") or arousal ("this sign makes me feel relaxed or excited"), or affective evaluations ("I like this sign"). A humorous sign may put viewers in a good mood. A controversial sign may arouse feelings of anger. A sign announcing a sad event may evoke feelings of sadness. Affective responses are important outcomes because along with cognitive responses they precede and determine ultimate behavioral responses.

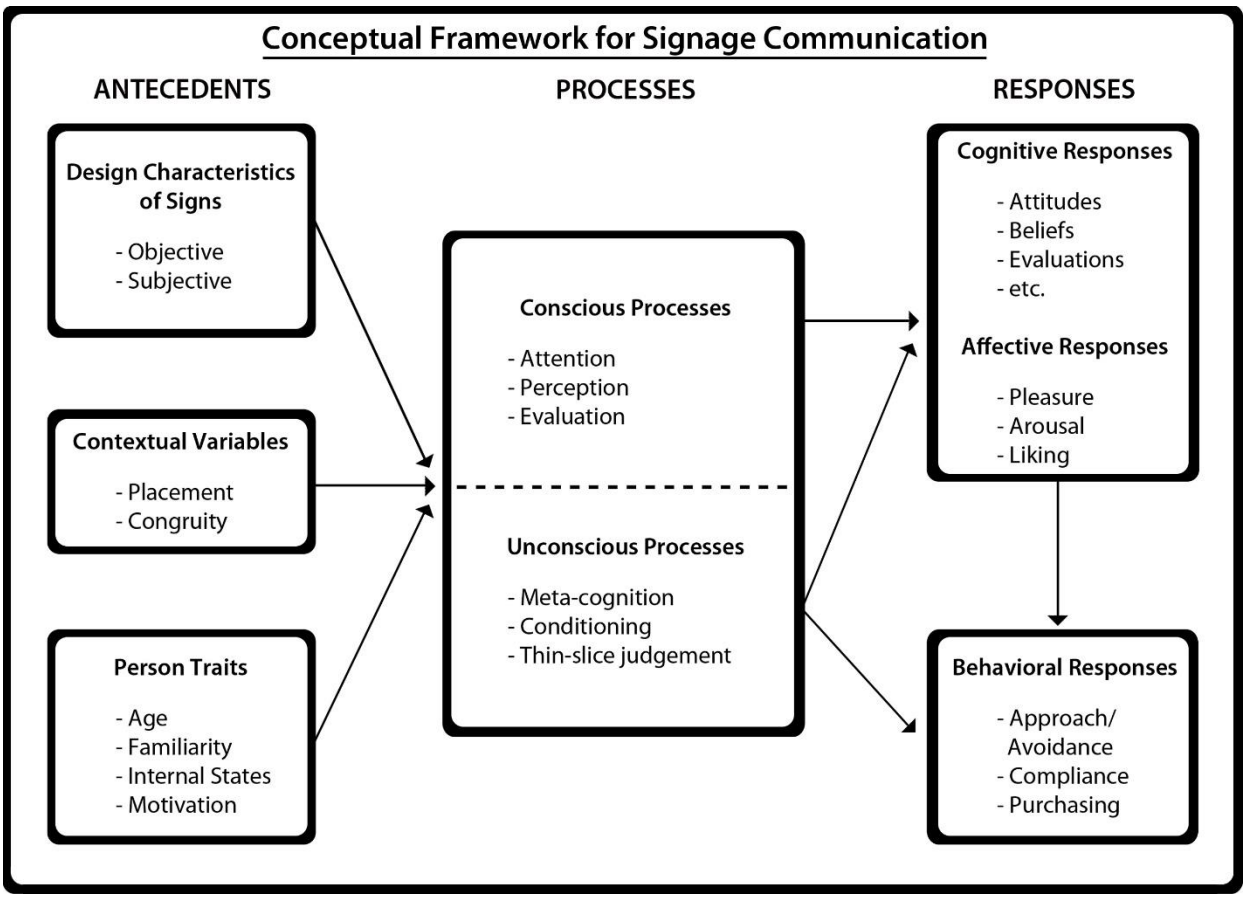
Behavioral responses are concrete actions. They can range from simple approach/avoidance behaviors, such as patronizing or avoiding a business, to more complex behaviors such as compliance with instructions or telling other people about the information you encountered on a sign. Cian et al. (2015) demonstrate that relatively subtle differences in the design of a sign can affect behavioral responses. In the context of warning signs they show that features of static visuals that suggest motion ("dynamic iconography") tend to prepare viewers more effectively to take action. Whereas some behaviors are automatic or involuntary, performed mindlessly (e.g., blinking), others are intentional or voluntary, driven by conscious decisions and intentions. Signs may trigger both types of behaviors. The relevancy of a

behavioral response depends upon the goals of the sign; in any case, complex behaviors – such as making a shopping trip to a store that is running a sale and making a purchase – are generally mediated by cognitive evaluations.

Linking the model components together

Not far from our university there is a little hole-in-the-wall restaurant with a large sign in the window that reads "Get in here!" Consider for a moment how this piece of marketing communication does *not* operate. It does not operate by people seeing the sign and mindlessly obeying the instruction. What is more likely is that people see the sign and have a number of intermediate responses. The sign may evoke a chuckle, which in turn may evoke positive affect and an immediate liking for the restaurant. Whereas the sign is slightly incongruous with normal expectations, it may incite some cognitive elaboration. People may infer the fun, casual character of the restaurant from the sign, or conclude that they are or are not in the restaurant's target market on the basis of the message's content or tone. People may use attributes of the cheaply made and carelessly worded sign as inferential cues to conclude that the restaurant is cheap, casual, or downscale. This inference will shape future behavioral responses. Or, people driving by may catch a quick glimpse of the sign in the periphery of their right visual field and form a favorable preconscious attitude that leads to a future stop at the restaurant for reasons unknown to the patron. What is most likely is that the sign's behavioral effects operate through all of these mechanisms, reaching different people through different, concurrently operating mechanisms.

The diagram that follows provides an overview of the basic linkages in the conceptual framework. The objective and subjective features of signs, contextual variables, and person traits are antecedents that combine interactively to evoke various conscious and unconscious processes, which lead to cognitive, affective, and ultimately behavioral outcomes. Behavioral outcomes are preceded and determined in part by cognitive and affective responses. This conceptual framework should be useful for organizing our thinking about signage research, for mapping published findings onto the "big picture," and for identifying missing pieces of the puzzle.



RESEARCH PROPOSITIONS

Reviewing the literature of signage, which is widely scattered across many, diverse disciplines, reveals an opportunity to identify and prioritize future research needs, to build bridges between academe and industry, and to develop an objective, scientific basis for the design, use, and regulation of signage.

One research opportunity is to develop a comprehensive taxonomy of design characteristics that can be used to describe signage. As we have argued, this is a necessary first step to facilitate research showing how design features combine with each other, with viewing context, and with viewer traits to produce predictable and controllable outcomes. The objective and subjective design features listed in the conceptual framework are merely an initial attempt to identify potentially important variables. Further development of this portion of the framework is required.

A second research opportunity suggested by the literature review and conceptual framework is in the area of visual acuity, legibility, and meta-cognition. Given the growing body of evidence in marketing and psychology showing that people tend to use the experience of thinking as though it were information, it would seem important to assess the impact of legibility not only in terms of comprehension, but in terms of processing fluency as well. Again, if a sign can be read, but readers must exert ample effort to do so, effortful processing may cast

a dark cloud over the information such that it is less liked, trusted, believed, etc.; or the demands of effortful processing may de-motivate processing to the extent that the sign is simply ignored. The goal of research in meta-cognitive experience of signage processing would be to develop an objective basis for determining the size and other attributes of signage that facilitate both legibility and processing fluency.

Yet a third research opportunity suggested by the literature review and conceptual framework is in the area of context effects and congruity. It is clear that a visual stimulus can be interpreted differently depending upon the context in which it is viewed, its relationship to its surroundings, and the congruity of the stimulus with viewers' expectations. So, what does this imply for signage? Architects and planners must make expert judgments concerning the appropriateness of signage. One important criterion for appropriateness is the aesthetic congruity of a sign with its surroundings including architecture and community. What is the underlying basis for such judgments? Are there perceptual gaps between expert judgment and those of the public and/or business owners? What is congruity and what are the effects of incongruity? These are all questions that can be informed by empirical research (Jourdan et al., 2013).

The conceptual framework suggests many other possibilities for future research, including work on the conceptual framework itself. As new evidence is mapped onto the framework, the relative importance of various design features and intervening processes as determinants of consumer responses should come into sharper focus. Moreover, a secondary effect of signage research in marketing should be to "mainstream" this under-represented topic. As more parties get interested in the topic of signage and marketing communication, the knowledge base should grow.

CONCLUSION

At this point in the history of the cross-disciplinary field of signage, it is well established that on-premise signage plays a major role in driving customer traffic to bricks and mortar businesses, and in informing customers and prospective customers about commercial offerings. Moreover, it is widely understood that signage does so by attracting attention, identifying businesses, conveying general impressions and specific information. Further advancement of the field of signage-as-marketing requires investigation into how and why communication effects of signs obtain. Our model proposes that characteristics of signs and traits of viewers combine to effect communication outcomes via underlying cognitive and intuitive processes. We offer the conceptual model presented here as an initial step toward generating further research that can be applied to the strategic design and placement of signs to advance the interests of business and the communities they serve.

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