PICTURES, PHONEMES, AND TYPOGRAPHY

by
Marc Treib

Visual languages convey both sound and meaning, although whether they address one or both, alone or in balanced measure, will vary with the graphic form used. If the picture bears sufficient resemblance to its referent, and the code being used is obvious,[1] there should be little trouble in linking the idea with the representation. But as we develop graphic systems which represent aural rather than pictorial ideas, the communication vehicle inherently becomes more abstract and the gap between the concept and its graphic form increases. To bridge this gap, vernacular sign-makers and designers create hybrid forms we might term *"eye-konic;"* letter forms enriched with pictorial content.

To trace a single idea/sound pattern through the range of its possible representations, we can use the sausage in American argot called the *"hot dog,"*[2] and trace it through the various non-verbal (perhaps non-oral is a better term) notation systems. We can witness the exchange of phonetic expediency for meaning, and the changes in signification dependent on context and familiarity within the cultural context of which the concept, hot dog, is a part.

If we begin with the Chinese character, or in this particular case, the Japanese version of the Chinese character, we immediately discover complications. A native speaker explains: "The art of *kanji* (characters) is very complicated. *atsui* (hot) can be written in two alternate ways."[3] The first has the connotation of hot for humans, because the temperature is hot or the weather is hot. So one wears a *yukata* and fans oneself because it is *atsui*. But the alternate character signifies heat, hot, calorific heat. In the case of our dog, he's not howling and complaining because of the heat; so it might be more appropriate to use this character still meaning, in English, "heat" and thus "hot dog."[4] Neither of these characters is historically derived from a picture, since the concept of heat would be difficult to abstract or stylize; although the second is derived in part from an abstraction of fire, while the first includes the radical for sun. Of course neither of these concepts, even with the character for "dog," conveys the idea of sausage, since the *dog* portion of the example, even in English, is totally metaphorical. And the pronunciation, *atsui inu*, in addition, has nothing to do with the English pronunciation, although the meaning of some sort of dog (but not a sausage) which is hot in some way is understood.

Using the phonetic writing systems creates different problems. Even in Japanese, a rough approximation of the English hot dog could be written with the *katakana* syllabary (or even in the *hiragana* syllabary). Although the pronunciation of the *katakana* *"hotto doggu"*

smacks of a Japanese accent (precisely for this reason, the utilization of a syllabary devised for Japanese rather than an alphabet adopted for English), the Japanese would be unfamiliar with the sausage unless grounded in American culture, or at least the more noted of America's eating habits.

The learned sounds of the alphabet recreate the sounds *"hot dog,"* but do so only at the expense of meaning. To an American, hot dog is a relatively easy concept to comprehend, its meaning probably acquired at an early age and its written form only a little later. He or she might also be familiar with alternative terms such as wienies, red hots, wieners, franks, frankfurters, and even Coney Islands, although this is really beyond the realm of the current discussion. But in context the American would also be able to recognize great distortions in pronunciations in the word hot dog, and in this sense one really doesn't read the word as the combination of the letters *d* and *o* and *g*, but together as *dog.* Thus the written form of the word dog in itself becomes a sort of pictorial symbol, like the Chinese characters for the concept, denotive or metaphorical, dog. We can even recognize eccentricities in spelling, for example *hot dawg,* as representing speech used in the South, hinting that we can read letter by letter when the word or spelling is unfamiliar. As John Downing points out, we really don't usually use the alphabet as a system of single letters, but following Whorf's notions of words, "sentences not words are the essence of speech, just as equations and functions, not bare numbers, are the real meat of mathematics."[5] Letters exist not in isolation representing single sounds or phonemes, but only in combination asserts Downing: "An alphabetic writing system's units are not merely the individual characters. The alphabetic system is primarily a code for phonemes. English has approximately forty phonemic units (varying with dialect), which are supposed to be signaled by the graphemic units of the writing system. Obviously, twenty-six individual letters cannot be enough for forty phonemes. Ellis (1845) a nineteenth-century linguist, analyzed all the alternative ways of printing and writing the forty or so phonemes of English and found more than 2,000 alternative graphemes."[6]

Downing adds that the redundancy in certain sounds and the complications of utilizing upper and lower case letter forms, in serif, sans-serif, cursive, and the various other alphabet variations, we can see that reading even in a supposed phonetic system is a complicated matter indeed.

We must also notice that increased difficulty in comprehension accompanied the move from a pictographic to a more abstract system of notation like a syllabary or an alphabet: one must physiologically convert the visual sensations through a complex cognition process until the idea is finally registered in the brain. Thus from the more emotional, immediate, and visceral reaction, one shifts to the complex and intellectual. Increased time in perception and mental registry is necessary as a result.

If in place of any abstract writing form we substitute a pictographic image of the hot dog, we might be able to increase the rate of processing. We still must assume that viewer knows that a sausage is to eat; though it is no longer necessary to know what is called. When words are included, usually highly evocative adjectives added to the picture which represents the noun, meaning becomes enhanced. The expansion of size may increase some aspects of comprehension. A building with a sign saying or depicting a hot dog *might* be read as a hot dog stand, but a building in the *form* of a hot dog will be understood with some degree of certainty, unless by some chance it happened to be used metaphorically.

The above discussion examines the range of devices used in the visual languages

of various cultures to communicate a single message. It becomes apparent that the production and interpretation of meaning is a very complicated process which has no single and universally applicable solution.

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Endnotes
1. The presence and effect of the graphic code should not be underestimated. We do not see the world in black and white, nor as flat forms represented by thin black lines, following the "rules" of linear perspective, for example. We learn to see *within* these codes and to see images that follow the codes as representations of our reality. See E.H. Gombrich, *Art and Illusion: A Study in the Psychology of Pictorial Representation,* Princeton: Princeton University Press, (1960), 1972.
2. I am aware of the problems caused by choosing a slang and metaphorical term such as hot dog. It was chosen because it shows just how complex metaphorical ideas are and how difficult they are to communicate, although the idea has been treated in a multitude of graphic ways.
3. In Chinese the two meanings of *hot* are expressed by two words and hence two characters. In Japanese, the one word, *atsui,* expresses both concepts. *Atsui,* however, can be written as two different characters borrowed from Chinese. Thus, greater and more subtle distinction is found in writing than in speech.
4. Yuko Honjo, Note to the author, March 1974.
5. Benjamin Lee Whorf, "Language, Mind and Reality," *Language, Thought and Reality,* p. 259 (Cambridge: MIT Press, 1973).
6. John Downing, "Is Literacy Acquisition Easier in some Languages than in Others?", *Visible Language,* VII: 2 (Spring, 1973), p. 150.

TYPE AND DECONSTRUCTION
IN THE DIGITAL ERA
by
Rick Poynor

Type is going to be as abstract as sand on a beach.
In that sense type doesn't exist anymore.
—Max Kisman

In the age of the desktop computer, font design software and page make-up programs, type has acquired a fluidity of physical outline, an ease of manipulation and, potentially, a lack of conceptual boundaries unimaginable only a few years ago. Everyone agrees that the new digital tools remove typography from the exclusive domain of the specialist—whether type designer, typefoundry or typesetting company—and place it (not always firmly) in the hands of the ordinary graphic designer. The results of this freedom, however, are the subject of intense and continuing debate. Traditionalists argue that the accessibility of the technology will accelerate the decline in typographic standards that started when the first clumsy photocomposition systems began to replace lead type. Evangelists enthuse about a soon to be realized digital paradise in which everyone will compose letters in personally configured typefaces as idiosyncratic as their own handwriting.

This essay is an interim report on these changes, filed while they are still under way. It addresses new work—from America, Britain, Germany, France, and The Netherlands—which is redefining our approach to typography. Some of these designs are entirely dependent on the new technology—in production terms it would be simply too time-