Signifiers, Not Affordances

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It's time for a review. As times and technologies change, as we have moved from individual to group, social, and even cultural computing, and as communication technologies have become as important as computational ones, how well have our design principles kept up?

One of our fundamental principles is that of perceived affordances: how we know what to do in novel situations. That's fine for objects, but what about situations? What about people, social groups, cultures? The answer is the same, yet different. Yes, there are still perceived affordances, constraints, and conceptual models, but there's more. There are trails. There are behaviors. We know how to behave by watching the behavior of others, or if others are not there, by the trails they have left behind. As we move from the world of stand-alone objects to social structures, complex, intelligent products, and a heavy dominance of services, then new principles are needed.

Powerful clues arise from what I call social signifiers. A "signifier" is some sort of indicator, some signal in the physical or social world that can be interpreted meaningfully. Signifiers indicate critical information, even if the signifier itself is an accidental byproduct of the world. Social signifiers are those that are relevant to social usages. Some social indicators simply are the unintended but informative result of the behavior of others. Let me illustrate.

Suppose you are rushing to catch a train. You know the train was scheduled to depart soon. You run across the city, run up the stairs in the train station, and rush on to the platform. But there is no train. Did you miss it, or perhaps it simply has not arrived yet? How can you tell? The state of the platform serves as a signifier. People milling about? The train has not arrived. An empty platform? Oops, you missed it. This is an example of an incidental, accidental signifier. It isn't completely reliable, working better in small towns with only occasional trains than in crowded cities where many trains use the same platforms, but that is the nature of signifiers: often useful, but of mixed reliability.

Social signifiers, such as the presence or absence of people on a train platform, painted lines on the street, the trails that signal shortcuts through parks or across planted areas, are examples of signaling systems. Signals come in many forms, sometimes naturally evolved, sometimes conventions of culture. Cues carry evidence, sometimes completely unintentional, as in the emptiness of the train platform. A flag's fluttering in the wind is a clue to wind direction and speed, usually unintentional, but nonetheless useful evidence to the observer. Sometimes the evidence is a trail or trace of previous behavior: desire lines, as these are called in architecture and city planning—when the trails made by people's footsteps across fields indicates their desire for paved paths.

I call any physically perceivable cue a signifier, whether it is incidental or deliberate. A social signifier is one that is either created or interpreted by people or society, signifying social activity or appropriate social behavior. Thus, although there are many possible signifiers of wind speed and direction, including flags, the movement of grasses or tree leaves, or traveling debris, if the signifier is a flag, it is also a social signifier—people placed that flag in its location, presumably for a reason (which may have nothing to do with providing an indication of the wind).

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The concept of "affordance" has captured the imagination of designers. The term was originally invented by the perceptual psychologist J. J. Gibson to refer to a relationship: the actions possible by a specific agent on a specific environment. To Gibson affordances did not have to be perceivable or even knowable—they simply existed. When I introduced the term into design in 1988 I was referring to perceivable affordances. Since then, the term has been widely used and misused. The result has been confusion and a gold mine

for academic scholars, who get to write learned articles about the true meaning of the term.

People need some way of understanding the product or service—some sign of what it is for, what is happening, and what the alternative actions are. People search for clues, for any sign that might help them cope and understand. It is the sign that is important, anything that might signify meaningful information. Designers need to provide these clues. Forget affordances: What people need, and what design must provide, are signifiers. Because most actions we do are social, the most important class of these are social signifiers.

We are all detectives searching for clues to enable us to function in this complex world. Whether it is flags waving in the wind, the difference between empty or crowded train platforms, or the desire lines illustrated by footprints in the fields, we search for significant signs in the world that offer guidance. In the social world comprising people and technology, these cues are social signifiers.

Consider a bookmark, a deliberately placed signifier of one's place in a book. But the physical nature of books also makes them an accidental social signifier, for the placement of the bookmark tells the reader how much of the story remains. Most readers have learned to use this accidental signifier to aid in their enjoyment of the reading. With few pages left, we know the end is near. And if the reading is torturous, as in a school assignment, one can always console oneself by knowing "only a few more pages to

get through." Electronic book readers do not have the physical structure of paper books, so unless the designer deliberately provides a cue, they need not convey any signal at all about the amount of text remaining. The traditional browser on the computer screen provides a deliberate social signifier, with the position of the scrollbar showing how much more of the document remains and its length showing what proportion is visible at the moment. Hill, Hollan, Wroblewski, and McCandless's addition of usage marks—edit wear and read wear—is yet another clever way for designers to add signifiers to guide readers of electronic documents [1].

The signifier is an important communication device to the recipient, whether or not communication was intended. From the purpose of surviving in the world, it doesn't matter to an individual whether the useful signal was deliberate or incidental: To the recipient, no distinction is necessary. Why should it matter whether the flag was placed as a deliberate clue to wind direction (at airports or on the masts of sailboats) or whether it was there as an advertisement or symbol of pride in one's country (on public buildings): Once I interpret the flag's motion to indicate wind direction, the flag's intended usage no longer matters.

Whatever their nature, planned or accidental, signifiers provide valuable cues as to the nature of the world and of social activities. For us to function in this social, technological world, we need to develop internal models of what things mean,

of how they operate. We seek all possible cues to help in this enterprise, and in this way, we all act as detectives, searching for whatever guidance we might find. If we are fortunate, thoughtful designers provide the clues for us. Otherwise, we must use our creativity and imagination. (This is the premise behind Distributed Cognition [2].)

Social signifiers replace affordances, for they are broader and richer, allowing for accidental signifiers as well as deliberate ones, and even for items that signify through their absence, as the lack of crowds on a train platform. The perceivable part of an affordance is a signifier, and if deliberately placed by a designer, it is a social signifier.

Designers of the world: Forget affordances. Provide signifiers.

ABOUT THE AUTHOR Don Norman wears many hats, including cofounder of the Nielsen Norman group, professor at Northwestern University, and author. It should not come as a surprise to learn that social signifiers play a major role in his new book, tentatively entitled *Sociable Dezsign*. He lives at jnd.org.

[1] Hill, W., J. D. Hollan, D. Wroblewski, and T. McCandless. "Edit Wear and Read Wear: Text and Hypertext." Working paper. CHI'92, Monterey, Calif., 1992.

[2] Hollan, J. D., E. Hutchins, and D. Kirsh. "Distributed Cognition: A New Foundation for Human-Computer Interaction Research." *ACM Transactions on Human-Computer Interaction: Special Issue on Human-Computer Interaction in the New Millennium* 7, no. 2 (2000): 174-196. <http://hci.ucsd.edu/lab/hci_papers/JH1999-2.pdf>