Piet Westendorp and Karel van der Waarde

Visual in user

Abstract

Introducing this special issue, Visual Metaphors, the role of metaphor and our various understandings of metaphor are discussed. Articles are introduced revealing their particular foundational position with regard to metaphor. The array of information applications covered by authors in this issue is broad, from italic type to nutrition diagrams, from computer interface to designers' abstraction processes. Examples with analyses regarding abstraction and reference are all part of the investigation.

The increasing complexity of the world around us is reflected in the increasing complexity of our communication with this world. Finding our ways in complex surroundings, installing and using more and more complex technological products, software and services, traveling and interacting more and more internationally, meanwhile getting less and less direct personal help—it has all created massive quantities of instructions, from tooltips to guided tours to interactive tutorials to safety instruction cards to wayfinding signage systems. Complexity and communication only seem to increase more rapidly than ever, and there is no reason to believe that it will get less in the near future.

Increasing complexity of the world around us not only implies increasing quantities of information; it also implies increasing complexity of the communication. Technical phrases, color-coded drawings, multimedia presentation, higher levels of abstraction, more symbolism, more metaphoric communication—all possibilities are applied to get the difficult messages across. Micro-electronics forced instructional graphic design to make giant leaps.

Because of nternationalization, distant marketing, increase of functionalities per device, together with miniaturization of the devices and displays, verbal language can often not be applied or may not be the most efficient way to communicate. As a consequence, we see the application of visuals,

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metaphors instructions

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instructive pictures, schemas, signs, icons, visual symbols and other visual tools, all part of a visual instructive language which is supposed to be understood internationally.

Such visuals may be thought of as just direct representations of reality. But of course they are not. Every visual—however realistic—is an interpretation or abstraction of the reality it depicts. A photo may be only a selection of reality—and further be completely realistic. But technical drawings, pictograms, icons, schemas and other visualizations are always interpretations and abstractions from reality.

In our view, metaphors are a specific type of abstraction and when we started conceptualizing this special issue of Visible Language, we thought of metaphors as abstractions in the ancient, traditional, literary way: a metaphor describes one thing in terms of another. That enables us to grasp abstract concepts, for instance the complex technological problems which we are confronted with when using modern electronic devices. Such metaphors are omnipresent in user interfaces of electronic devices, software, way signage systems, etc. We all know the famous examples: the wastebasket on the computer screen that indicates that we throw away a document or a program or whatever from the computer hard disk by dragging the icon into the wastebasket. Some may remember the only interesting alternative: the black hole on the NeXT computer. By far the most used—but rarely mentioned visual metaphor—is the arrow to indicate direction (*see figures 1, 2 and 4*). Another nice metaphor in the strict sense is the bird's feather on a gas pedal in a car to indicate: 'drive carefully' (*see figure 3*); the idea can be seen in various other car manuals. Metaphors in the wider, but still literary sense, figures of speech, are for example the *pars pro toto* (a kind of metonymy) (*figure 5*), a *euphemism* (*figure 6*). On the edge of being a metaphor in its widest meaning may be for instance the *anacoluthon* (*figure 7*)—if the anacoluthon can be a figure of speech at all.

These were the kind of visual metaphors that we were thinking of when we asked for contributors for this issue. But all contribu-

Figure 1 Arrow to indicate direction.

tors have a much wider interpretation of the word 'metaphor' than we had in mind. Implicitly or explicitly, they all follow Lakoff and Johnson, who consider metaphors not at all as something related to language—neither verbal nor visual. For them, all abstract concepts are understood in terms of something else: more specially concrete and typically spatial concepts. They consider all abstract thinking as metaphoric, and this comes close to Terrence Deacon's conclusion that human beings are different from other animals because they are a symbolic species. Maybe we are humans—and differ from all other animals—because we think metaphorically.

This wider interpretation of metaphors by the contributing authors of this issue produced a rich variety of articles around

the issue of visual metaphors in user instructions.

Isabel Meirelles explicitly indicated that she followed Lakoff and Johnson's interpretation of the word 'metaphor.' She presents a study into metaphorical visual aspects of presentations in dietary visual displays, comparing eight versions from seven different countries. She convincingly supports the Lakoff and Johnson interpretation of 'metaphor' showing that all eight visual presentations that she examined are spatial concepts (both hierarchically ordered or non-hierarchically ordered) and that metaphors can be defined as cross-domain conceptual mechanisms. We were glad to notice the metaphors of the pizza, the pie-chart, the food-plate and the pyramid of food in her examples, bringing these close to visual literature.

Marilyn Mitchell and ***Peter van Sommers*** describe the graphic representation of time in computer interface design, based on the spatial metaphor that time is a path or trajectory. They present an overview of diverging ways in which time has been expressed in computer interface design, sometimes in ways that we hardly realize that time is involved. By making comparisons with both spoken language, the sign language of the deaf and the impact of the structure of writing, they explain how these metaphoric representations of time help users interpret where they are in a process, in the past and the future, the time to complete tasks, what functionalities are available now and how to move through data, etc. To be useful, Mitchell and Van Sommers conclude, representations of time in computer interface designs must reflect people's conceptions of time and represent the kinds of time that people require when using a computer.

Phil Jones pinpoints that even typefaces themselves can be metaphors, for instance to indicate movement. He specifies how italic and oblique typefaces can possess a kinetic quality because of their slant to the right. Closely following Lakoff and Johnson's interpretation of metaphor, Jones argues that the dynamic quality of italics arises from preconceptual structures, such as image schemas, related to experiences of two very different activities: writing and running. Indeed, this is an intriguing interpretation of Lakoff and Johnson's rendition of metaphors as 'concrete and typically spatial concepts.' Although Jones' subject is quite down-to-earth typeface design, his argumentation is quite abstract. Maybe that is why he argues that the meaning that we construct from italic type is not a simple correspondence between slanted letters and a body in motion, as a reader might have thought. Using both verbal and visual examples, Jones shows

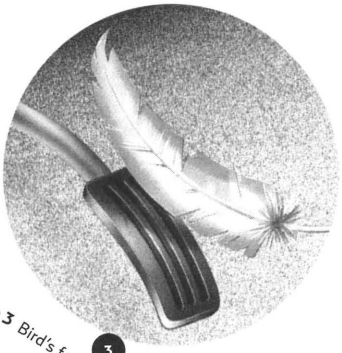

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Figure 3 Bird's feather to indicate careful use of gas pedal.

Figure 2 Arrows to indicate direction.

2

Figure 4 Arrow in plastic to indicate direction to press the HP cartridge.

4

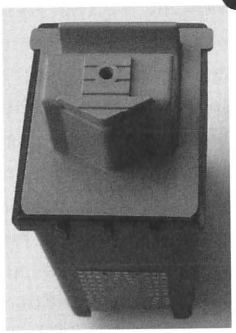

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Figure 5 Pars Pro Toto (a kind of metonymy) to indicate sports.

6

Figure 6 Euphemism to indicate that there will be some sex in a movie on tv.

7

Figure 7 Anacoluthon warning sign for playing children.

that meaning is constructed in a context, spatial and horizontal, but also for instance including meaning and place of occurrence, where italicization is just one aspect. 'Italics are salient because of the sense of movement they suggest, and this sense of movement can be used to construct metaphoric associations in different ways.'

'Metaphors are a kind of abstraction,' we stated above, and two papers describe how to reach graphic abstraction and depiction. 'To turn a real object (3D) into a 2D representation is an example of graphic abstraction,' ***Regina Wang*** and ***Chun Cheng Hsu*** write in their opening sentence. Indeed, this is often also the case with representing something that is already two-dimensional (a photo for instance) in another type of graphic, visual representation. The levels of abstraction have been explained so well and in a totally visual way by Scott McCloud in his wonderful best-seller *Understanding Comics-the invisible art,* from 1993. Wang & Hsu start out showing these levels of abstraction, but they quickly proceed to the question: To what degree is it possible to let computer software do the abstraction for designers. They present an overview of abstraction methods in functional graphic design and then present the results of a test with some filtering functions in Adobe Photoshop, varying for instance the curve precision, the angle threshold, the size of the pixels and the cell-size of a digital picture. Wang and Hsu conclude that the 'simplification' command of the software's internal program is not satisfactory. Their second study reported in this article may help computer software designers to produce better components to produce graphical simplifications through: the 'shape simplification method,' the 'quantitative reduction method' and software-aided simplification. The latter, however, obviously needs human intelligence—something that computer programmers over many years have tried to implement—in vain.

O →I→M→V→P is the formula that ***Steven Boyd Davis*** proposes in his schema of the design process in constructing visual representations. In his opinion this schema is valid for both 'realistic' and 'metaphorical' graphics; it even emphasizes the commonalities between these apparently distinctive modes.

In this formula, the 'M' is the Model, the observable object in the world; 'P' is the Picture that is going to represent this Model. Since every Model in the real world is based on an Idea, 'I,' this also goes into the formula, right before the 'M.' The Idea must be based on Objectives, 'O.' In Davis' view, Model is pre-pictorial and probably three-dimensional [something we think is not always the case, see above] and the Picture is flat, many design decisions must be made and it is useful to separate geometry and such attributes of the Model from the design decisions that relate to the Visualization, 'V,' such as point-of-view and framing. Davis further contrasts 'PI-realism.' which is the Pictorial Ideal, with the

Visual Experience, 'VE-Realism' and concludes that the schema is grounded in the impossibility of making perfect representations. He thinks that a preferable model of visual representation might be based on the view of design as a form of rhetoric, as proposed by Sharon Poggenpohl in *Visible Language*(1998, 32.2, pp. 200-233). We couldn't agree more, especially since in our view we are close again to our interpretation of the word 'Metaphor.'

References

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Lakoff, George and Mark Johnson. 19080. *Metaphors We Live By*. Chicago, IL: University of Chicago Press.